A PLAN
of the
CITY OF HARTFORD

REPORT BY

CARRÈRE & HASTINGS

ADVISORY ARCHITECTS

A Plan of the City of Hartford

PRELIMINARY REPORT

BY

CARRÉRE & HASTINGS, Advisory Architects

TO THE COMMISSION ON THE CITY PLAN

OF THE CITY OF HARTFORD, CONNECTICUT

IN RELATION TO

THE RECTIFICATION OF THE PRESENT PLAN AND THE DEVELOPMENT AND EXTENSION OF THE CITY OF HARTFORD ON COMPREHENSIVE LINES OF ORDER AND HARMONY WITH RECOMMENDATIONS

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THE COMMISSION ON THE CITY PLAN.

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FOREWORD

Hartford was one of the first, if not the first, American city to have a permanent City Plan Commission authorized by legislative act. Prior to this time the city had been developing as most other American cities do without any definite plan. The city officials and municipal departments had never attempted to forecast the Hartford that was to be. However, in spite of this fact the Hartford of 1910 was widely recognized as a city of fine public spirit, civic pride and external attractiveness. It was a city of beautiful homes, charming avenues and streets, notable banks and insurance institutions, large and prosperous manufacturing establishments and commercial organizations, — a city justly proud of its heritage, with a people intelligent, energetic, skillful and contented.

But Hartford was beginning to feel that if it was to maintain its prestige among American cities of its class, it must not indulge in self-complacency. It must keep alert and abreast with the times. Everything must be done to make the Greater Hartford of the future not only a more healthful city to live in, but also a more attractive place to work in. It was coming to be recognized that while sanitary measures, which directly or indirectly affect the health and happiness of the people, should be given first consideration, those which tend to beautify and add to their comfort and convenience should not be overlooked.

The people were gradually coming to realize that however competent and experienced her city officials might be, there was great need of an intelligent, comprehensive City Plan, as a guide to future development and improvements. And this plan must be based upon a thorough, exhaustive study of the city by a skilled, experienced, and disinterested outside expert.

The firm engaged to undertake this work was Messrs. Carrére and Hastings of New York City. They were chosen

not only because of their well-deserved national reputation as architects and landscapists, but also because Mr. Carrére was personally known to many of our leading citizens and had been employed as advisory architect by the State Arsenal and Armory Commission and later by the Technical High School and Municipal Building Commissions. Only those who came into close personal or official relations with him are fully aware how deeply Mr. Carrére became interested in the problems of Hartford's future, or how enthusiastically he gave himself to their solution. His sole ambition was to master every element in the problem in order to produce a City Plan that would stand the test of future generations. His able partner, Mr. Hastings, and his associates, Messrs. Oliver and Meeks, inspired by his master mind, labored together with him to this same end. The result of their united efforts was a Report on the City Plan for the City of Hartford which is destined to have a beneficent and far-reaching influence upon this growing municipality. It will also stand as a model in City Planning for American cities, and help to the solution of many a municipal problem here and elsewhere. This report will likewise stand as Mr. John M. Carrére's final work in City Planning.

Late on Saturday afternoon, February eleventh, after a painstaking critical review, he attached his signature to the Hartford Report. With his family he was to sail on the following Monday for an extended European trip and a well-earned rest. The next day, Sunday, he met with the accident which proved to be fatal, and America was thereby bereft of one of her foremost architects. Few men in the profession have left a deeper impress upon the art life of the country, and none surpassed him in unselfish devotion to that which was truest and best.

This City Plan of the City of Hartford by Messrs. Carrére and Hastings was Mr. Carrére's valedictory to the world and it will remain his crowning work in City Planning.

Frederick L. Ford.

A PLAN OF THE CITY OF HARTFORD

AT the very inception of civilization men began to gather into small groups for one common purpose or another, whether for the pursuit of commerce, for defense against their enemies, or other pursuits in which there was an advantage to be gained by doing those things collectively which the individual could not accomplish, so that from time immemorial, ever since the earliest civilization, men have gathered in small settlements which have gradually developed into villages, towns, and cities; and while, with the advance of civilization, the conditions of communal life became more complex and were gradually expanded and modified, at no time has there seemed to be any realization of the future and any of that foresight which would plan a city with regard to its present conditions and with a vision of its ultimate development and growth.

While the idea of a common life for a common purpose goes back to the beginning of things, real organization with regard to essentials or non-essentials was very slow of development and even at the present time has seldom been founded on truly scientific principles or based on actual requirements and statistics.

It is interesting, for instance, to learn that in the great city of Paris no attempt was made at municipal lighting, or any definite ordinances attempting even a system of private lighting, until the time of Napoleon the First.

We read in Benjamin Franklin's Autobiography of his efforts to organize tramps into voluntary street sweepers, especially during bad weather, and that these men stood at the corners and swept the crossings and obtained a few pennies for their trouble from the passers-by; and this is almost within the memory of living man.

The development not only of the plan and resultant growth of our cities, but the form of government, the methods of taxation, and most of the interests which affect every citizen directly or indirectly, have either been neglected or treated separately and without co-ordination. Most cities, and certainly our American cities, with which we are mainly interested, have simply grown and expanded, not only as to physical development, but as to administrative methods, on entirely unscientific lines of least resistance and with the false notion that the individual interests must prevail, as against the interests of the community as a whole. It is true that exceptions exist and the people have been willing to give up their so-called personal privileges in such matters as health and order, and to submit to sanitary regulation and to police regulations; and we are gradually approaching a better understanding of this side of city life.

A few years ago congestion of traffic in our cities, in New York, for instance, was of daily occurrence and everyone seemed to have the right as a free-born American citizen to block traffic. Today, following the example of New York, which has modelled its traffic regulation on European standards applied to the local conditions in a most successful manner, even small cities of one hundred thousand inhabitants or less have adopted traffic regulations, and yet only a few years ago a distinguished judge in the city of New York reprimanded a policeman for arresting a truckman who would not conform to the regulations, with the statement that he was a free-born American citizen and had a right to go where he pleased.

These rather specific examples are given to show to what extent even in minor matters the theory of individual rights has been misapplied to the great detriment of the community at large.

Much larger questions are involved than traffic regulations. It is obvious, for instance, that with the rapid and phenomenal growth of our modern cities and with the very wise limitation under which they are developed as to their borrowing capacity, no city can afford to meet its legitimate expenses and provide

intelligently and economically for all of its legitimate needs, and much less to anticipate these needs, as they should in many important features, such as the extension of their main arteries of traffic, whether they are avenues, subways, or similar features; so that every city is limited in its power of intelligent expansion by its debt limit and is obliged to economize by saving, which is the poorest kind of economy, in administrative matters, at the expense of efficiency, which is the only real economy in the long run. And yet European cities have already adopted corrective methods with such success and so efficiently that we also are beginning to consider these methods and to discuss their application.

Excess condemnation proceedings which enable a community to buy in excess of the needs of an improvement, to protect the improvement upon which it is spending the taxpayers' money, and to reap the profit for the benefit of the city as a whole, which with us is reaped by the speculator, enabled the city of Paris to carry out the wonderful projects of Baron Haussmann, to revise the plan of Paris as to its streets, avenues, and parks, and to create the wonderful city that we see today; and while in detail no one would think of reproducing Paris in America, in principle it is the most convenient, practical and beautiful city taken as a whole that we can point to today.

The process of excess condemnation is a most intelligent and scientific recognition of the right of the community to benefit as a whole, to reap not only what profit there may be from an improvement which belongs to the people and is paid for by the people, but to protect that improvement and to rectify all of the conditions, lot sizes, streets, and others which are disturbed by the improvement, so as to make them most advantageous.

As a matter of fact a city, in the light of modern civilization and modern science and with the help of modern statistics, must be considered as a great machine having a most intricate organism and a most complex function to perform, and it must be so well planned and put together and run, that as an

engine it shall produce the maximum of efficiency in every direction with the least expense and the least friction.

Examples are rare of a city that has been deliberately planned and laid out, and most of our cities — nearly all — must be completely reorganized both as to plan, development, and administrative methods. The task is a complex and difficult one and the vested rights, prejudices, and habits of its people, stand in the way and must be considered and gradually modified.

Even in such a city as Washington, the most noted example of a city planned deliberately, with the special conditions which prevail in that city, in which little or no commerce or industry exists, and which is strictly a governmental and residential center, the plan fails already to respond fully to modern conditions, which have changed so rapidly with the introduction of steam, electricity, rapid means of locomotion, and complete rearrangement as to volume and methods of traffic, and which, strange as it may seem, will change even more rapidly and more completely, if, as seems probable now, the air is also to be conquered, and flying is to become a practical means of locomotion.

These considerations, which are very general and broad in their nature, are introduced into this report in order to indicate that the mere study of the plan of a city and the making of pictures or maps is but a very small part of the problem which confronts every American city. To a very great extent this side of the problem should follow rather than precede the consideration of the broader problem of city government and city administration, which involves the questions of health, safety, order, transportation by land and by water, street traffic, the supply of food and other necessaries of life, the modes of recreation for all conditions of men whatever their age or occupation, the taxation for all of these purposes and all of the many elements which together make for a healthy, prosperous, and happy community.

The present movement to organize, replan, and to anticipate the future growth of cities is not confined to the United States

Diagrammatic representation of rapid transit traffic in and about London and Berlin (reproduced from "Der Stadtebau") showing the essentially radial character of a city's traffic.

but is a world movement, and it is interesting and instructive to study what other nations are doing who have anticipated us in this movement and have already made considerable progress. Some serious mistakes have been made against which we should guard, but great progress has been made when the problem is looked at in a broad aspect; and with the forms of government prevailing throughout the rest of the world the movement has been directed with less resistance and less interference on the part of the individual than is to be expected in this country, and therefore on broader lines of efficiency, which, with democratic institutions, can only be realized gradually and by educating public opinion, which is a slow process. On the other hand when the American people become thoroughly interested and imbued with a big idea, its development is apt to be rather too rapid and to anticipate a thorough knowledge of the problem, which requires time and patience. It behooves us therefore to approach this subject deliberately, carefully, and seriously and not to proceed too far until we have some assurance that we are working on correct principles and towards an ultimate end.

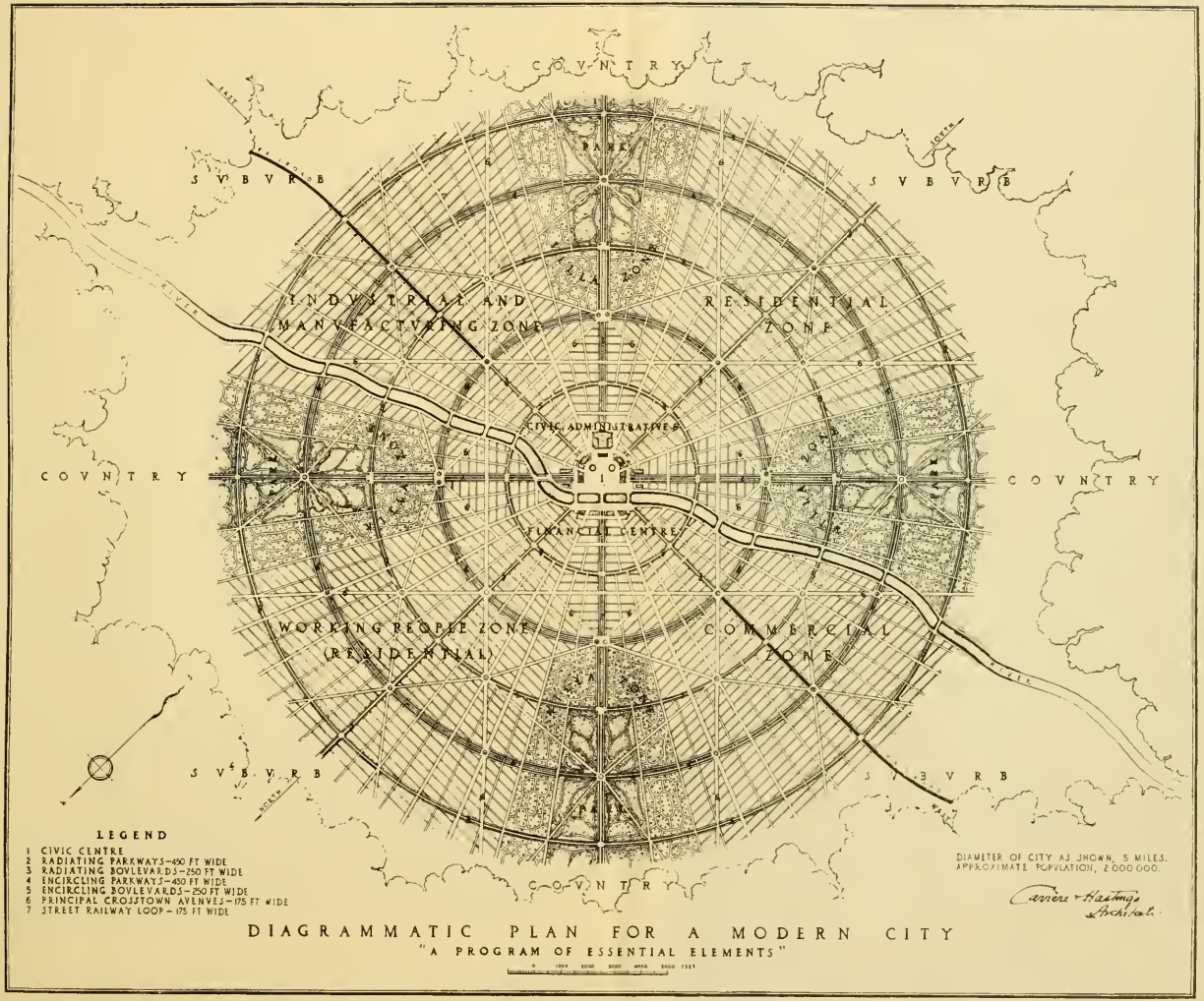
A careful examination of the plan of Hartford shows that it possesses many of the best features of an efficient, well organized, and well ordered city plan — a fact which is not generally appreciated even by the inhabitants of the city itself; and it is also evident that with some rectifications and some extensions well within reasonable limitations as to cost and according as they may affect existing conditions and individual rights, the plan can be so vastly improved as to make it in many respects one of the best planned and, in time, one of the most attractive cities in the country. While the citizens of Hartford must be conscious of the beauty of their parks, especially their great Bushnell Park, and of the charm of their shaded streets and lovely homes, there is always the danger that they may not fully realize what an individual character and strong personal note of charm and local color the city of Hartford possesses, of which they should be very proud and very jealous. While it is not possible, neither is it desirable, to arrest the modern spirit, it it not only possible, but absolutely necessary, that it should be

directed in such a way as not to place the city of Hartford on a common level with every other American city, so that however admirable any one development may be in itself, it may be totally unfit and ill at ease in Hartford — a destruction of its general aspect.

A careful study of the plan of Hartford has led us to prepare a diagrammatic plan of an imaginary modern city containing the fundamental and underlying principles which are essential features of such a city, and while in this plan, which we present herewith, we have ignored all questions of grades and have made all of our arteries either straight or circular, it must be remembered that they are merely illustrative of a principle and that in reality the grades and natural features would change the diagrammatical symmetry of this plan into something more real, without, however, affecting the underlying principles.

We have imagined a territory with a river running through it. In this territory we have placed a civic center where would be grouped the public buildings of the city, such as the City Hall, the Post Office, the Court House, other municipal buildings, and presumably the Union Railroad Station, and other semi-public buildings which for reasons of accessibility and on account of their universal function in this type of plan would be best placed at the geometrical center of the city. It is obvious that while these buildings would not all be grouped on the civic square, they would develop immediately adjacent thereto.

Starting from this point there are four parkways each 450 feet wide, which is three times as wide as the section of Pennsylvania Avenue extending from the foot of the Capitol to the Treasury Building in the city of Washington. These avenues are in their nature intended to be long and comparatively narrow parks, carrying out the theory that the country should gradually taper out into the city, rather than the reverse process of the city tapering out into the country, producing confusion and ugliness especially in the suburbs, which is bound to happen



DIAGRAMMATIC PLAN FOR A MODERN CITY

"A PROGRAM OF ESSENTIAL ELEMENTS"

This map has been prepared to show in schematic form the necessary components of a properly organized municipality according to modern conditions.

when the development of a city is without plan and on the lines of least resistance.

Numerous other avenues placed at proper intervals, none less than 125 feet wide, which admit of parkings and tree planting, radiate from the civic center towards the country — the four central minor avenues or boulevards being made more important and having each a width of 250 feet.

Circular avenues or parkways are provided every half mile; every other circular avenue is made 450 feet wide, which will place these wide avenues a mile apart; the intervening circular avenues or boulevards half a mile distant, are 250 feet wide.

It will be evident that by this process light and air and ample facility for recreation and playgrounds are provided, so that in no instance will any inhabitant have to travel more than a quarter of a mile in any direction to find either a circular or a radial park or parkway of ample dimensions, the treatment of which can vary with different avenues, or in different parts of the same avenue, to meet the local needs of the inhabitants. These avenues provide not only the simplest, most convenient, and effective means of circulating from one point to another, breathing spaces and recreation grounds, but they bring trees, shrubs, grass, and flowers into the very heart of the city, so that every inhabitant can travel from one point to another with ease and with the maximum amount of comfort and pleasure. They are also important factors in establishing a system of fire breaks which would prevent any great conflagration, such as we have witnessed in several of our American cities within recent years.

At the intersection of the circular and radiating avenues, rond-points or circles have been established which are connected diagonally and otherwise by short avenues, varying from 125 feet to 160 feet in width, which will relieve congestion and provide more direct means of communication between any given points than either the circular or the radiating avenues, depending on the direction of the travel. Between these parkways and avenues, minor streets divide the spaces into blocks and give access to the buildings that are placed thereon, bearing very

much the same relation to the main arteries, as a whole, that paths in a garden or a park would bear to the main avenues and roads. On account of the ample traffic and light and air provision which are afforded by the main avenues, it is economical in space and in maintenance, and proper, that the width of these minor streets should be reduced to a minimum, consistent with light and air conditions for the actual buildings which face thereon.

As the city extends towards the country and on the lines of the four main parkways, we have indicated the possible development of city villa sites, that is to say, for the erection of residences surrounded by individual gardens or grounds of limited extent, gradually leading into the park itself, which would be developed as a public pleasure ground, and into the suburbs, and finally into the country. It is readily seen that the same principle would apply with the expansion of a city from a comparatively limited population, say, of a few hundred thousand, into a city of many millions, as the successive circular avenues would continually increase in diameter and new radiating avenues or parkways would be introduced, the number multiplying with the periphery of the city, all leading from various directions without congestion or confusion to the civic center.

Whatever traffic may be required, whether surface cars or tunnels, would be diverged into any of the circular avenues or brought to the civic center where a complete circle or loop has been provided which would accommodate all of the lines arriving from different directions and redistribute them on their outward journeys. Of course the same conditions would prevail with regard to automobile or carriage or other traffic. It is apparent in all of our large cities that for short distances the automobile, whether private or public, will be used more and more, because it takes the passenger to his destination, and the surface and underground lines will be used more exclusively for longer distances. With a plan of this description the circular and radiating avenues provide all the facility for surface cars that will ever be required.

The Germans, who have approached all civic problems more scientifically than any other nation, have developed in their cities a system of zones and have passed laws, which are well received by the population, establishing zones within which certain classes of buildings must be confined, so that the residential part of the city on the one hand, or the workingmen's homes on the other, are protected from the encroachment of factories or commerce. An attempt to legislate in this direction with us in America would not be tolerated. We have felt however that by establishing a definite railroad center and by bringing the railroad lines to this center through the town, as shown on the plan, and refusing to allow the railroads to enter through any other section of the town, which is within the control of the municipality, these zones would be established, perhaps not as completely, but sufficiently so, on the lines of least resistance and by natural process, as the factories would naturally seek the neighborhood of the railroad and could be concentrated in one quarter of the city as we have shown, while the commerce, which to a large extent controls the factories, could be established in the opposite quarter. An intelligent method of taxation, which would establish a different rate for each of these zones, would further tend to concentrate buildings of the same character in a given zone and to prevent any invasion of other zones, all of which would be feasible with our institutions, in harmony with our form of government and acceptable to the taxpayers.

We have supposed that the wealthier class of residents would locate their homes in the most desirable section of the city facing outwardly towards the south, and that the working people would be placed in the opposite quadrant; the industries being at the east of the town and the commerce at the west, so that the prevailing breezes, whether from the southwest or northwest, would be towards the factories and away from the town, protecting both residential sections and the commercial section from smoke. The financial center we have imagined would be concentrated adjacent to the civic center. In this manner it will be seen that almost ideal conditions

would be established, as all of the residents would live adjacent to their occupation whether they traveled in one direction or another, the industries on the one side and the commerce on the other being between the two residential districts.

This plan must not be taken as arbitrarily establishing definite conditions. It is merely a picture to illustrate the broad principles that should exist in any comprehensive city plan and which, to some extent, can be brought about in many of our cities, Hartford among them. By comparing this diagrammatic plan with the general plan of the city of Hartford, which is submitted with this report and which includes the modifications and extensions which we suggest, it will be seen that many of the principal features of this plan, though in a different form, are contained within the plan of Hartford. There is a civic center and many important and ample radiating streets, not straight, but nevertheless leading in a definite direction away from the civic center. Similarly while no circular streets, as such, exist, it is possible to travel substantially in a circle, of which the civic center would be the center, by at least two avenues, if certain missing connections are provided and if certain streets and avenues are widened and in certain cases are made continuous, as we have suggested in our plan.

It will be noticed that throughout the report not a word has been mentioned about the beauty of the city and that particular stress has been laid throughout on organic and practical considerations. It is not generally understood that in a problem of this kind beauty does not consist in ornamentation, as is generally supposed; that the beauty of a bridge, for instance, is not the result of a handsome balustrade or a few lamp-posts or some ornament, but that it is fundamental and is a part of the conception and depends on its being a truthful expression of a practical purpose, well conceived and developed in good proportions, harmoniously, and expressed in terms of beauty in so far as form and detail are concerned; and that no mere surface ornamentation can make a bridge, a building, or any object beautiful that does not serve its purpose, that is not

A Comprehensive Plan for the Organization of Street Circulation to Solve the Particular Problems That Arise in Hartford, with a View to the Future Development of the City As Well As to the Relief of the Present Conditions.

conceived in truthfulness and developed in its proper relation to its function and to its surroundings.

It follows, therefore, that if the organism of the plan is correctly conceived and laid out, if all of the practical conditions are met truthfully and completely, if the lines of traffic are the shortest in any direction and ample for all purposes, if the relation of width to length and purpose of the streets, avenues, and parkways is well planned, the matter of developing the practical features of a city on this groundwork becomes a mere detail. Even if unattractive buildings and other improvements should be erected, either in part or in whole, they can be removed and replaced and in time the city can grow complete in its beauty, which is bound to happen.

Such an example is to be found in the city of Washington, with its splendid plan, and yet no one would claim that the architecture of Washington, with the exception of a few individual buildings, is beautiful; but even the foreigner coming to Washington ignores the inadequacy and ugliness of most of its buildings and is impressed with the beauty of the city as a whole, with its broad avenues, its many squares and beautiful vistas along its diagonal avenues bordered with trees. The ugly buildings are fast disappearing and much beauty is being added to the architecture of Washington day by day. It is gradually becoming a really beautiful city. Owing to the general character of the architecture of its public buildings, the development of the city is proceeding on general lines of harmony, so that the buildings, whether in design or in materials, in general aspect and in size or scale are pleasingly related to each other and enhance each other's beauty, which is in marked contrast to the prevailing custom of building without regard to the general effect and of considering each building as a separate entity, so that it very often not only injures the appearance of every building within its perspective, but is in turn injured by other buildings which have no relation to each other and do not in any way produce the effect of harmony.

There is no one single factor in the development of the architecture of a city on lines of order, harmony, and beauty that is more important than this very question of building as a whole and the necessity of obtaining general harmony, which does not necessarily mean monotony and without which no individual building or no individual street or square can be really beautiful.

HEIGHT OF BUILDINGS: TAXATION.

Hartford is in the fortunate position of having very few tall buildings of the type known as "Skyscrapers," so that it can adopt a definite policy and establish definite regulations which can be made to apply equitably to all and without interference with already existing vested rights. In our judgment the future development of the city is so largely dependent on a proper regulation of the height of buildings that we cannot urge too strongly the immediate consideration of this important matter and the establishing of definite rules governing the same.

It must be borne in mind that a city is made up of land which is utilized for buildings or other solid structures and which we will designate as solids, and all of the open spaces, whether for streets, parks, gardens, courtyards, or otherwise which are kept free from any structure or other impediment and which we will designate as voids. It will be seen at once that with the modern method of statistics, which are so helpful in the study of any important problem, it is possible to establish within reasonable bounds, not arbitrarily or definitely, but approximately, the proper proportion between the solids and the voids of any given territory, varying with the conditions in each locality, whether mainly used for business or for residences or other purposes, always bearing in mind that the voids must be subdivided into two classes — those voids which provide arteries of traffic, and the remaining voids which are either for recreation or for light and air.

In the business district fewer parks are necessary and smaller open spaces or courtyards may be sufficient, while the

traffic arteries, owing to the increased traffic, must be larger; the reverse being true in the residential district. But if we eliminate all matters of detail and consider the city simply as solids and voids, it is possible, considering merely the questions of light and air from the sanitary and practical point of view, to arrive at a minimum of voids for any locality however it may be distributed, whether in streets or courtyards, and to expand this minimum as required.

It is not necessary nor would it be desirable to prohibit the erection of "Skyscrapers" and we do not believe that the citizens of Hartford would approve of such a policy and there are sections of the city where higher buildings may not only be permitted but are necessary.

Looking at the subject in its general aspect the tall building belongs in a privileged class and is another instance of individual assertiveness at the expense of the community. The concentration of interests in a small area, with the consequent concentration and in many instances, such as New York, overcrowding of a given area which overloads the land, the streets, and the public service, establishes fictitious and unnatural property values in certain localities for the benefit of a limited number of property holders at the expense of the community at large. If the height of buildings were restricted within reason, and in consequence thereof the same number of people and the same amount of business or other activity were distributed over a larger area, the increased values would be distributed more equitably. A concrete case will best illustrate the point: In the city of New York property values on Fifth Avenue between Twenty-third and Forty-second Streets have risen to phenomenal figures in a few years because of the inrush of the high-class retail business and the limited territory at its disposal; but these values are based on the fact that every lot in this territory, which is now improved with four- or five-story buildings, is in the process of being improved with a skyscraper, thereby increasing the size of the lot many-fold. The conditions of trade, it is true, make this possible, but if a proper limitation of buildings on Fifth Avenue were established, this

same trade would have to go east and west and the rise in property values would cover a very much larger area. It would probably be greater in the aggregate, so that the city's income from taxes would be no less, a much larger number of property owners would be benefited, conditions of light and air would be established on reasonable and sanitary bases, and that whole section of the city would be more beautiful and monumental in its appearance.

The "Skyscraper" illustrates more clearly than almost any other feature of modern city development the lack of scientific treatment, for it is already demonstrated by statistics in certain parts of Germany that the creating of zones and the regulating of the character of building that is to be placed thereon, including the height of the same and the proportion of the lot that can be built upon, does not affect the ultimate rise in the value of property throughout the city, but on the contrary that the increase in the number of inhabitants produces a perfectly normal rise in the value of real estate, which can be determined with absolute accuracy by modern methods of statistics, so that it is unquestioned, even at this early stage of the study of this problem from this point of view, that the increased wealth of a city, in the appraised value of its real estate, grows normally with the increase in its population and is distributed equitably over the entire area of the city and is not dependent on the abnormal growth and appreciation in values of any one restricted area.

Our entire mode of taxing real estate, which has been handed down to us from generation to generation and is entirely unscientific, is largely responsible for the "Skyscraper," for our taxes are assessed on the value of the land plus the value of the improvement; and while in the case of a "Skyscraper" the value of the improvement is increased proportionately in comparison with the lower building and the taxes therefore are presumably fairly apportioned, the value of the land is the same in any given locality, whether it contains a 20-story building or a 4-story building, so that it will be seen that in the case of two lots of equal size and equal value, the one containing

a 20-story and the other a 4-story building, the first is making five times as much use of its land and paying no greater tax on the value of the land than the neighbor, who only has a four-story building; in other words the owner of the "Skyscraper" is making a use of his land which is equivalent to having five lots of the same size, only that he superimposes them in order to get the advantage over his neighbor which he derives in the matter of taxation.

Taxes are levied to maintain the city government in all of its branches, including public improvements, and it would be fair to suppose that each taxpayer would pay a tax in proportion to the service which he received from the municipality. The owner of a 20-story building is certainly receiving many times the service given to the owner of a 4-story building, where lots are equivalent in size and value.

It is a fallacy to maintain as is so often done that the object of this method of taxation is to encourage the improvement of property. It does promote these conditions in a limited area, as may be seen in a city like New York, and leaves the rest of the city either with vacant lots or obsolete buildings, to the detriment of the whole city from whatever point of view it may be considered.

We cannot help realizing how these conditions promote selfish greed on the part of many land owners at the expense of the community, for no sooner is a building erected, no matter what its character may be — a church, a bank, or a residence, — which is fairly permanent in its character and low, than advantage is immediately taken of its position to build a "Skyscraper" on the adjoining property, obtaining light benefits without cost, injuring the appearance of the neighborhood, and compelling in the long run the removal of the low building and its replacement by another high building.

It would be fair to suppose that some method of taxation could be devised, based preferably, as suggested hereafter, on the income bearing capacity of the property rather than on its cost value, or if it must continue to be assessed on the cost value, it should be perhaps modified so that it would be assessed

on the number of square feet of floor area contained within a building, or even the number of cubic feet or volume of the structure, at a fixed rate for that portion which would be contained within the general limitation of height and at a gradually decreasing rate for the additional area or cubical contents above the general limit of height.

By this means the tax would be proportioned on the space conditions whether floor area or cubical contents of the building, that is to say, on the use that the owner could make of the same and not on the cost value of the building, with the immediate advantage that the owner would not be punished as it were through his taxes for building a better building, but on the contrary would be encouraged and rewarded inasmuch as his building would be more attractive, more salable or rentable, and in any event more permanent.

In such a scheme of taxation, which is merely suggested as worth considering, the value of the land is not considered at all until it is built upon. It would therefore be necessary to levy a tax on unimproved land, within the city limit or within such limit as might be prescribed from time to time, as long as it remained unimproved, and this tax might well be somewhat heavy in proportion to other taxes within the city limit.

It would seem to us that some such method of taxation would establish a proper balance and would encourage better building with better distribution of solids and voids and would go very far towards preventing congestion or over-crowding of the population, whether in "Skyscrapers" or in tenements.

It is already apparent in some of our larger cities that through lack of regulation both as to the limitation of the height of buildings, and, what is even more important, as to the proportion of the area which can be built upon and the area which must be left free, whether in courts or otherwise for light, air, and sunshine, large territories are being so solidly built up that the occupants of these buildings are practically living without light and air, so that it is no exaggeration, if we look sufficiently into the future, to state that the health and happiness of a large portion of our population is at stake, and

that it behooves the community at large to remedy these conditions which are detrimental to that portion of the population who are unwilling and helpless victims of these conditions — conditions which are in a measure more pernicious than the over-crowding and so-called congestion of the tenements, because they are more permanent in their character and less apt to attract public attention and to rouse public indignation.

We believe that conditions which allow a property owner to erect a solid mass of building covering 90 per cent. of his lot on a lot 25 feet wide on Madison Square in the city of New York adjoining the Madison Square Presbyterian Church, show a total disregard of every consideration of public decency on the part of the owner of the building and unpardonable negligence on the part of the people of the city of New York, who will permit such conditions to be established and to be multiplied.

It is a difficult matter to regulate because the selfish interests of the property owners are arrayed against any interference on the part of the authorities with the so-called individual rights to do as they please, regardless of the interests of the community at large, for the mere temporary advantage which they obtain over their neighbors, notwithstanding the short-sighted policy which they are pursuing as far as their own interests are concerned, as it is only a question of time when the stolen light, whether from the low building adjoining or from an inadequate court adjoining fairly open territory, will be taken away by other improvements which will crowd around and shut out the light from the side windows, reduce the size of the courts, and destroy the value of the original investment, which nevertheless in the case of a " Skyscraper " involves such a large sum that it is more or less permanent, at least for many years and becomes under these conditions an absolute menace.

While we are not prepared to make any definite recommendation in matters of detail we believe it essential

1st. That the height of buildings should be limited.

2d. That the proportion of the area of each lot which must be left vacant for light and air courts should be definitely determined.

We suggest that in accordance with the generally accepted opinion of the best authorities, in order to obtain proper sunlight and air in the streets, the general height of buildings should not exceed one and one-half times the width of the street. That in order to secure light and air other than that obtained from the streets no building should cover more than 80 per cent. of its lot, leaving not less than 20 per cent. for inside court and light shafts, and the rear courts should extend completely across the rear of the lots, so that all the courts together may form an uninterrupted court or open space in the middle of each block. The rear courts should represent not less than 10 per cent. of the area of the lot, this 10 per cent. increasing to 20 per cent. as the height of the building increases, so that if the building is built the full height permitted by the width of the street, the rear court would have to be the full depth represented by the 20 per cent. reservation.

These percentages regarding reservations for light and air for each lot are intended to apply to those sections of the city which are thickly built upon and devoted mainly to commercial or industrial buildings. The proportion should be largely increased for all classes of buildings of a residential character, whether residences, apartments, or tenements.

Having established the general total height of the building and the total proportion of the lot which can be covered by a building, we suggest further that provision be made to allow buildings to be carried higher, without limitation, on condition that the part which extends above the established limit of height shall not occupy more than 50 per cent. of the total area of the lot and that at least two of its exterior walls should set back from the lot line. The result of this provision would be, considering any one section of the city as a whole, that 80 per cent. of the whole lot area of this section of the city would be built upon up to a given height, depending on the width of the street, so that 20 per cent. of the area of all the lots would be reserved

for light and air. The solids, or built-up portions, would be 80 per cent. of the lot area; the voids would be 20 per cent. of the lot area, in addition to public reservations, such as streets, parkways, and other open spaces.

Above the general limit of height the solids would represent 50 per cent. of the area of the lot and the voids 50 per cent., in addition to the voids represented by streets, parkways, and other open spaces; in other words, a scientific proportion between solids and voids would be rigorously established for each section of the city according to its character.

While our recommendations are only tentative as to percentages, we should like to have them considered definite as to methods.

Much attention is being paid to the serious question of the congestion of population. It would be better expressed by the term overcrowding of population. All manner of remedies are being suggested to provide proper housing for the poorer classes of citizens. The problem is very far-reaching and complex and altogether too important to be treated adequately in a report of this kind, but inasmuch as we have referred elsewhere to the whole subject of taxation and inasmuch as we believe that the method of taxation is mainly responsible for most of the evils of overcrowding, we want merely to touch on the subject in order to bring it to your notice.

Under the present method of taxation, which assesses the value of the land and the improvement, a fair return to the investor renders overcrowding inevitable, as the increase in population and the increase in demand for accommodations and the resulting increase in the value of the land raises the assessed value of real estate and hence the taxes; but inasmuch as the tenant has a fixed and limited income and cannot afford to increase his rent, the landlord is obliged to meet the increased taxes by permitting more people to crowd into the same building. What really happens, is that the tenant pays a higher rent and sublets part of his space to boarders in order to make up the difference. It follows that when statutes are passed and tenement house regulations are made limiting the number of occu-

pants in tenements, in proper relation to the space conditions without regard to the assessed land values, or resultant taxes, a condition is created which disturbs the investment and discourages the investor; in fact creates an impossible condition by increasing the fixed charges through taxation and reducing the income bearing capacity of the property by statute.

The only alternative, of course, is to drive the investor into new territory where the land is less expensive and to establish new districts temporarily and until the conditions which prevailed in the old district reach the new district. While the argument may be open to criticism, it is nevertheless true that the entire relation of the landlord to the city as a taxpayer and to his tenant is unbearable and unscientific.

If the taxes were levied on the income bearing capacity of land and improvement, the whole problem might be solved. We might then conceive of attractive and permanent buildings with plenty of light and air and with a limited number of tenants producing an adequate return and establishing ideal conditions because of the fair treatment that the landlord would receive from the community in the matter of taxation. It would be an encouragement to the landlord to build a better class of building under better conditions and the very permanency of the improvement would attract capital.

It is stated as a fact that, owing to methods such as we are describing, in certain parts of Germany it is found quite as profitable, on adjacent streets, to build detached houses for two families with gardens surrounding them, as it is to build four- and five-story flats covering a large proportion of the lot; and we are not at all sure, though we claim no expert authority on the subject, but that this same method of taxation might bring about similar results with regard to all other improvements and might be the foundation of a proper revision of the present methods.

We suggest that the entire question of taxation be studied by a special commission of experts appointed to thoroughly investigate the problem in this country and abroad with the

view of reorganizing the entire system to meet modern conditions on a correct, scientific, and philosophic basis.

It has been our object in this report to present to you some general thoughts, not so much with the idea that they were final or conclusive, but for the purpose of bringing your attention to the same and arousing public interest and promoting a public study of these various questions which affect the whole community. Much that we have stated is old, some of it we have stated ourselves previously, either in our own reports or in collaborative reports relating to other cities, and a great deal of it will be considered as obvious; but after all, life is made up of a very large percentage of obvious things which we neglect, which we do not do, and which we need to have called to our attention over and over again, in the hope that some of them may receive careful consideration and in order that some of our mistakes and shortcomings may be corrected. This is not offered in the nature of an apology, but merely as an explanation.

PROBLEM OF THE CENTRE OF THE CITY.

CIVIC CENTRES.

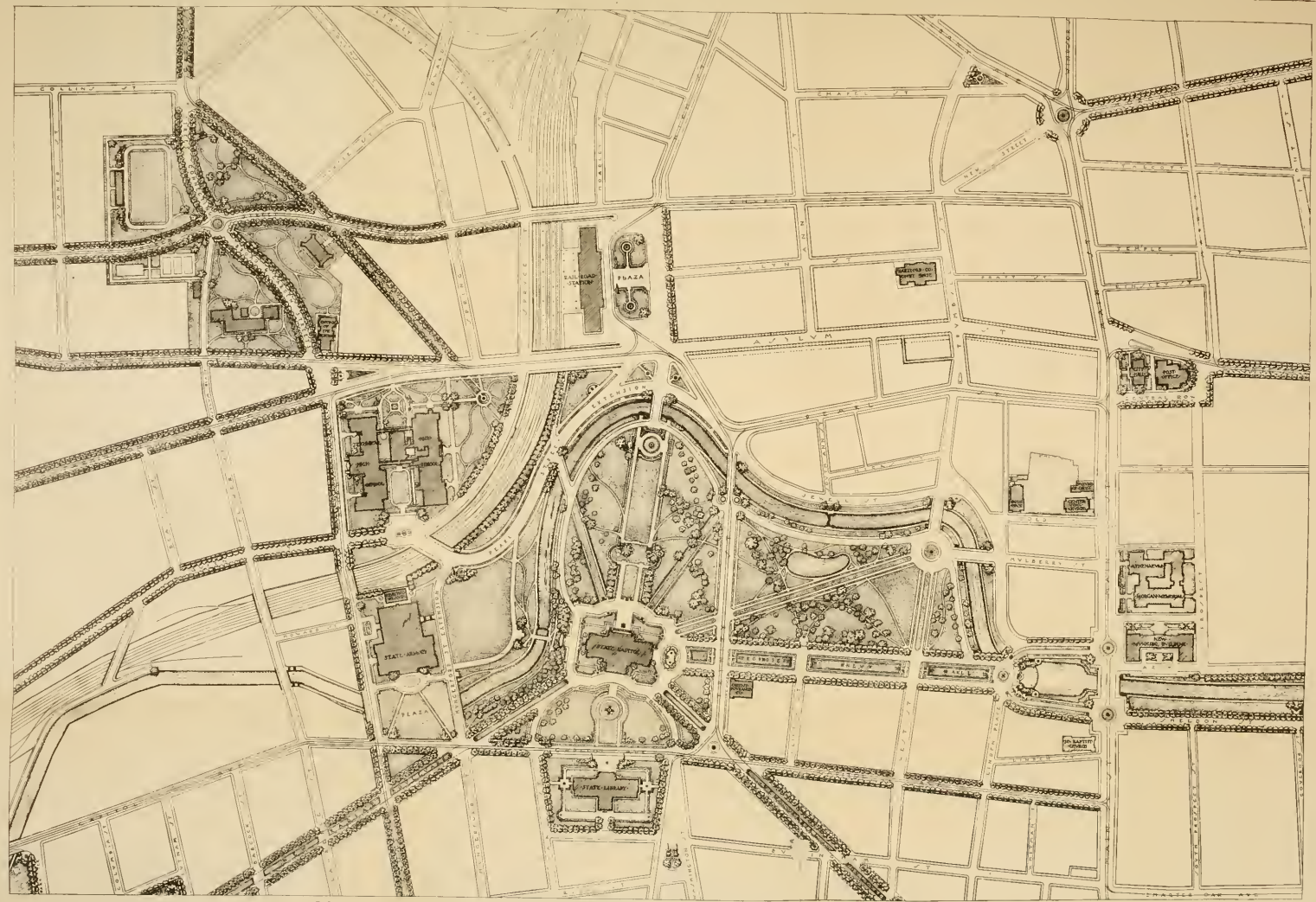
Hartford is to be congratulated on having a main civic centre with such possibilities for further development as Capitol Hill and Bushnell Park with the Capitol Building, and the further opportunity of developing the municipal civic centre by grouping and bringing together the old City Hall, the Municipal Building, and the Morgan Memorial Library, which, while not immediately next to each other, establish the character of that part of the city. It has a further civic centre in the grouping of its High School and its Technical High School and the Hartford Theological Seminary. These are important groupings, but we call special attention to Mr. Adshead's article appended to this report, and to his suggestions with regard to the establishment of secondary civic centres. If, instead of scattering the various municipal buildings, such as fire-houses, police stations, schools, branch post offices, and others, an attempt were

made to group these services in each section of the city around a park or playground or open space, greater convenience, greater economy, and more attractive results would be obtained, and a more orderly process of development would be established than is now the case. It requires foresight and planning with an eye to the future, which has not been the process of our American cities in the past. Each one of these buildings has been built without any regard to their interrelation or to the possibility of their grouping for the convenience and general benefit of the city.

On examination of the general map of the city of Hartford, we are immediately confronted by unusual conditions. Hartford, as the Capital of the State of Connecticut, and the seat of the State Government, possesses a beautiful Capitol Building crowning Bushnell Park. To the west of this building is the new State Armory, and to the south the handsome new State Library. These three buildings form an impressive and monumental state group of which the city may be justly proud, for, although they belong to the State, they are, geographically, a part of the city.

At present Bushnell Park, the New York, New Haven & Hartford Railroad, and Park River form a decided barrier to crosstown traffic. This traffic has become so congested that efficient means must be taken to adequately relieve such congestion and to render this portion of the city thoroughly convenient and attractive, a section which, with a reasonable and effective layout and with fine buildings and grounds properly related to each other, would become for all time the monumental and administrative centre of the city, as the already existing elements of its plan not only justify, but demand.

Bushnell Park is occupied at its western end by the State buildings. The Park itself runs in an easterly direction, bounded on the north by the Park River almost to Main Street. On Main Street and in a line practically due east from Bushnell Park is situated the Wadsworth Athenaeum, and the new Morgan Memorial. These, together with the new Municipal Building, the plans for which have just been completed, form



PLAN OF THE CENTRAL SECTION OF THE CITY OF HARTFORD
SHOWING PROPOSED DEVELOPMENT

Suggested plan for providing adequate traffic-bearing thoroughfares east and west, with proposed re-arrangement of the railroad tracks and station, and showing the proposed mall and layout for the Capitol Grounds, to perfect a monumental grouping of Hartford's fine buildings, and by these means to beautify the city into a complete and effective organism.

Looking west across Main street from the site of new Municipal Building toward the State Capitol.

St. Paul — View looking toward the New Capitol from the Old Capitol.

A mall is to be laid out in St. Paul connecting her two capitol buildings. Hartford can connect her two fine groups of monumental buildings by a similar treatment.

another splendid monumental group and represent the city and its activities, intellectual and governmental. It remains to connect Hartford's two monumental groups by a dignified Mall or Parkway, to produce an unusually handsome layout such as few cities of the world enjoy at their centre. What such a treatment may become in a city of 3,000,000 inhabitants may be seen in London with her new Mall and Victoria Monument nearing completion, and in Paris with her Tuileries Gardens and Place de la Concorde.

It is in and about this same central section of the city that the principal and most difficult questions of the problem of improvement, as proposed by the Commission on City Plan, arise. We make the following suggestions: —

Railroad.— The New York, New Haven & Hartford Railroad at present makes an awkward and difficult entrance into the city. Trains arriving in both directions are forced to climb a steep grade on a sharp curve. We suggest that this curve be eased by bringing the tracks, as they round the hill west of Bushnell Park and Park River, further to the west and closer to the High School building. This will materially enlarge the radius of the curve. In addition we suggest that the present steep upgrade of the tracks as they approach the Railroad Station from either side should be eliminated and that instead the tracks should approach the station from either side on a slight down-grade which will permit of carrying Asylum, Church, and Pearl Streets over the tracks, as is shown in our large scale plan of the center of the city. This change will not only greatly improve the traffic conditions on Asylum Street, but will be of great value toward relieving Asylum Street of its portion of east and west traffic between the business and residential sections which it bears to-day almost entirely.

Asylum Street.— By depressing the tracks to Elevation 32, the present minimum elevation for surface improvements on the east side of the city, it will be perfectly feasible to carry Asylum and Church Streets over these tracks with a grade of 5 per cent. or less at the steepest point. At present Asylum

Street, between the railway tracks and its junction with Farmington Avenue, attains a maximum of over 6 per cent. Carrying Asylum Street over the tracks in this manner and with the elevated Terrace Park suggested hereafter, a splendid outlook of Bushnell Park will be had by everybody traveling on Asylum Street, whether east or west, adding great attraction to the travel on this street at that point. This street, from the point where it begins to rise from the railroad station plaza, to its junction with Farmington Avenue, should be at least one hundred feet wide. Church Street, from the point where it begins to rise from the northern end of this same plaza, should be at least seventy feet wide.

The question of widening these two streets between Main Street and the station is a more difficult one. Asylum Street is narrowest at the very point where it should be broadest, that is where it runs into Main Street. There are two feasible means of broadening this street. First, by setting back the building line on one or both sides of the street. If this means is taken of widening Asylum Street, it might be preferable to change the building line on the south side, avoiding the more valuable and permanent improvements on the north side. The second method of widening this street is to move the curb line to the present building line and to carry the sidewalks under arcades of eighteen to twenty feet in width moving the outer side of the ground floor walls back this same number of feet. Many cities of Europe furnish examples of what a street treated in this manner may become. The arcading of Asylum Street would thus furnish a covered way from the railway station to the center of the town, bordered with small retail shops just where they are most needed and of the type which would be best suited for this kind of treatment.

Church Street.— The widening of Church Street is an improvement much more easy of accomplishment, as this street, which is at present cut off by the railroad, does not bear its share of traffic and has not yet been developed with the character of improvements which would render the widening of the

street difficult. It therefore would be both feasible and desirable to widen this street to a total width of seventy feet between Main Street and the Railway Station, while carried over the tracks at the width of seventy feet, as proposed above, it should be prolonged to Garden Street, with the same width of roadway, but with the addition of parkings between curb and sidewalk, making a total width of ninety feet. Continuing across the Reservoir and Asylum Grounds it should finally join Asylum Street at Woodland Street. In this manner we would have a second, through, traffic-bearing street, running from the heart of the city at Main Street, to its outer edge.

Pearl Street.— In order to create a third artery for through traffic from Main Street to the west side of the city, a similar scheme has been devised for Pearl Street. It is suggested that the curved section of Park River directly north of the Corning Fountain should be moved bodily to the south, or nearer to the Fountain, and that Pearl Street should be extended practically over that part of the territory now occupied by the Park River, and swinging around the Corning Fountain to the south, and over the railroad tracks by a bridge with its axis in a line with the dome of the Capitol, to join with Hopkins Street at the southeast corner of the High School. A very easy grade may be obtained by slightly depressing Hopkins Street at this corner. The north side of Hopkins Street should be moved to come in a line with the present north side of Queen Street; all widening on this street to be done on the south side. The new street should be eighty-five feet wide. It should continue across the block bounded by Sigourney Street, Farmington Avenue, Beach Street, and the railroad, and should join on to the eastern end of Hawthorn Street. It is further suggested that this street be widened and prolonged to join the new Boulevard into West Hartford. In this manner a fine broad thoroughfare would be formed across the city, which, together with Church Street, would solve the question of the existing and ever increasing congestion on Asylum Street.

Railroad Station.— With the grade removed from the railroad by depressing the tracks, and sufficient streets provided to take care of through traffic east and west, the location of the Railroad Station becomes the next important feature of this problem of the center of the city. It has always seemed to us most impressive and unusual that the railroad should approach Hartford in such a manner as to arrive in the very center of the town and afford such a wonderful view of Bushnell Park and the Capitol. For this reason it would be most regrettable if any scheme, such as we learn has been sometimes suggested, of passing under Asylum Hill in a tunnel, were seriously contemplated, as it would deprive everybody, whether stopping at Hartford or merely traveling through, of this wonderful impression of the city, which gave us, for instance, a splendid opinion of the city long before we had ever visited it. This has led us to suggest a revision of the grades and curves, but to urge that the general scheme be not otherwise modified.

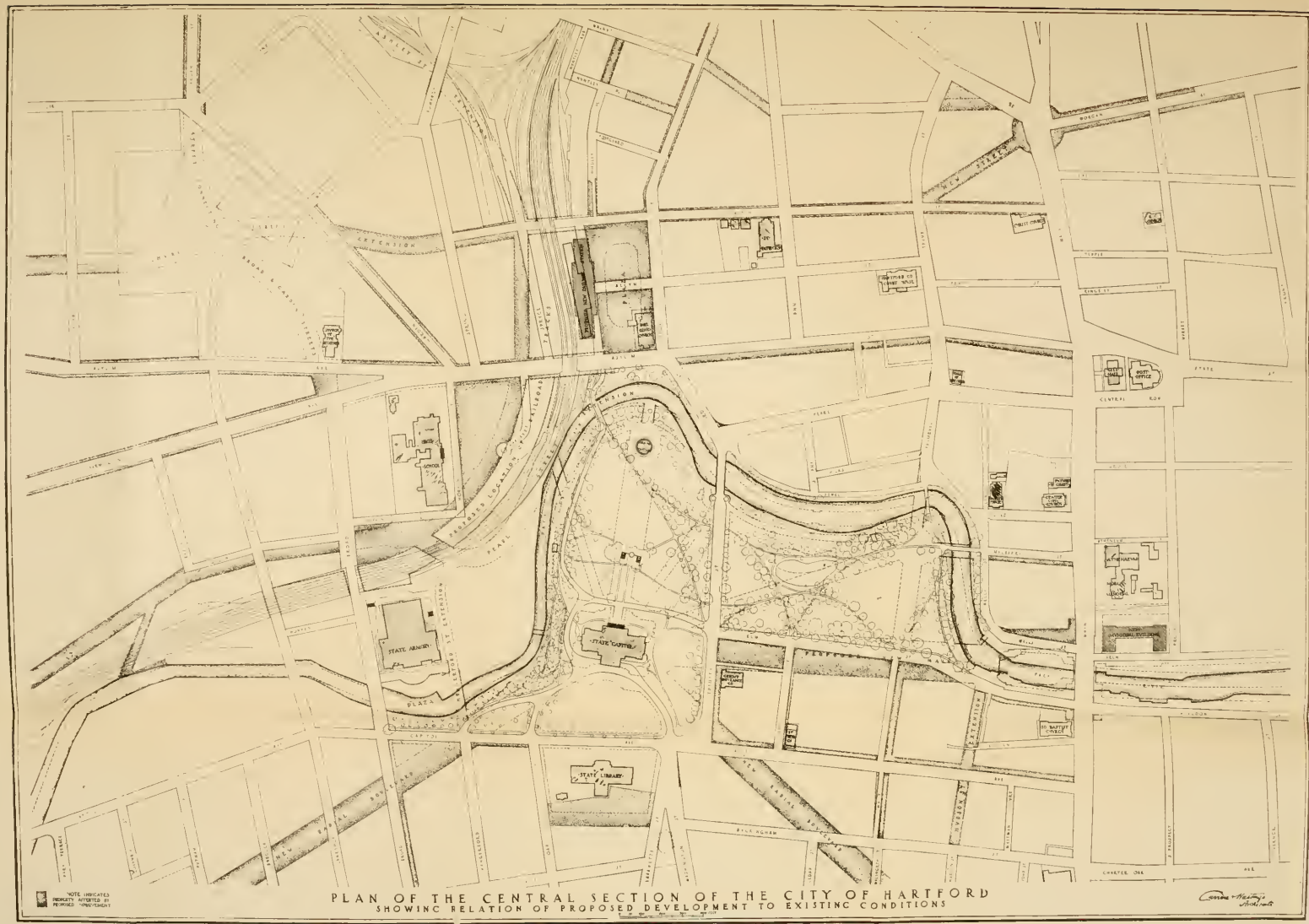
The present Railway Station has become quite inadequate. It is inconvenient of approach, dark and crowded, but its present location seems on the whole most satisfactory both from the railroad's point of view and from the city's point of view, being most centrally located and accessible, as Church, Allyn, and Asylum Streets run directly to the center of the business district. Asylum and Church Streets run in the opposite direction through the heart of the residential section. With the Pearl Street extension, and with Trinity Street, we tap the southern section of the city. High Street, widened, serves the north.

We recommend that the two blocks bounded by Union Place and by Church, High, and Asylum Streets be condemned and added to the space occupied by the present station, to form a site sufficient to contain a station of suitable size with adequate approaches. By lowering the tracks as described above, the railway would enter the city at a level with the main floor of the station, which would be only two or three steps above the level of the surrounding square. In this manner direct access

Union Place and Union Station from south side of Asylum Street.

Buda-Pesth — Museum Ring.

Open space and formal planting about a building add dignity to it and enhance the general appearance of the site. Such space about a railroad station adds not only to its appearance but makes easy the necessary circulation about such a building.



The shaded areas show territory affected by proposed extension and development.

on a level would be had to the series of tracks going in one direction, and access to the series of tracks going in the other direction would be provided through tunnels with steps or incline runways to each platform. This is the approved modern method of planning for stations which accommodate through traffic, inasmuch as the height of the tunnels can be reduced to a minimum, so that the inconvenience of going down and up is likewise minimized, whereas in the case of overhead bridges the height is considerably greater in view of the fact that the bridges must be at a considerable elevation above the tracks.

Bushnell Park.— In the general claim to a beautiful plan, Hartford's chief asset is Bushnell Park. With its splendid trees and lawns it has a character quite its own which should not be harmed by a radically formal layout, which would naturally suggest itself in an endeavor to assemble the handsome buildings in and around it. We have therefore endeavored to preserve the park practically as it is. It must be recognized, however, that without sufficient means of transit such a park, no matter how splendid in itself, becomes a barrier, and as the city extends it may tend to arrest the development along natural and desirable lines. We have spoken of its forming, with the railroad and Park River, a barrier to east and west traffic. From its very shape it tends to do so in an increased degree in the case of traffic north and south. With the development of the southern portion of the city that is bound to come if Hartford's manufacturing district to the southwest is increased, it will become essential that ready communication be established some day between this district and the center of the city, if such industry is to be maintained and administered economically.

We therefore suggest the possibility of some day carrying bridges across Park River opposite the present ends of Trumbull and Mulberry Streets, and at the intersection of these streets creating a "rond-point" or circle around which will run a broad roadway, and from this "rond-point" Trumbull

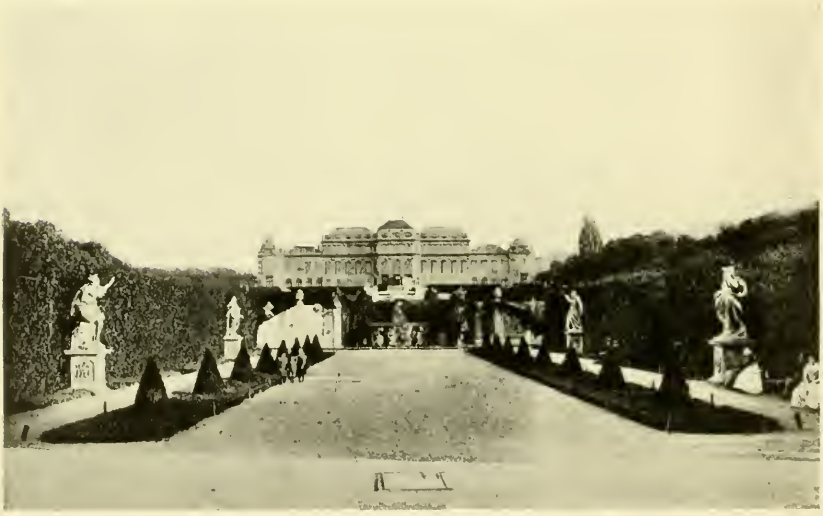
Street, continued to the south as a roadway with parking on both sides and adequate pathways, should cross the park and join on to West Street. By this means it will be possible to cross the park in a southerly direction without coming around by way of Main or Trinity Streets.

From this same "rond-point" or circle we likewise recommend carrying a roadway diagonally across the park along an axis in line with the dome of the Capitol until it intersects with Trinity Street. Such a roadway would not only be an ornament to the park with the fine vista of the Capitol that it would give, but would greatly increase and assist access to the southwest quarter of the city. It would be possible, as we have shown, to build the bridges and the roadways, but to treat the roadways for the present as parkings with footwalks only, so that no street traffic would occur thereon until such time as it becomes absolutely necessary. This would permit of whatever planting or development taking place in the meanwhile, being done in anticipation of the ultimate use of these arteries as streets, which is inevitable unless the growth of Hartford should be unexpectedly arrested.

Armory Plaza.— It has been suggested that Park River south of the Armory be covered over, and graded so as to establish an open plaza in front of the Armory. This is not only feasible, but highly desirable, as in this way an adequate approach would be obtained for the fine large State Armory, which at present is reached from Broad Street only. In connection with this feature we suggest prolonging Hungerford Street along the east side of the Armory practically on an even grade to join Pearl Street extended. The Armory would then have an open plaza on its southerly front as a dignified approach, facing Hungerford Street on the east and Broad Street on the west.

We suggest that the open space to the east of the Armory be graded as nearly level as possible in order to form a suitable Parade Ground. This entire space is overlooked by the terraces about the Capitol building itself, and would be visible in its entire extent to a very large number of spectators.

Bushnell Park looking south toward the State Capitol, showing the Corning Fountain.



Vienna — View from Garden toward Palace Belvedere.

Vistas and formal planting set off formal architecture to the best advantage.

Capitol Avenue.— It has also been suggested that Capitol Avenue be moved to the north, giving a more open approach to the new Library building. We consider that this would be a mistake. The Library was designed, and is built, parallel to this street and its approaches and terraces fit in admirably with the street as at present located. Moving the street to the north will cut down the open space in front of the Capitol, and will tend to accentuate the lack of parallelism between the Capitol and the Library, which is at present unobjectionable, in fact hardly noticeable. It would divide into two inadequate parts what is now one fine lawn or park.

Capitol Grounds.— The grounds, drives, and paths about the Capitol itself are susceptible of a far better arrangement. Statues are now placed at haphazard points, and are out of all relation with the building, fitting into no general scheme of landscape whether formal or picturesque. We therefore recommend the serious consideration of a logical layout of the lawns, roads, paths, and terraces in the immediate vicinity of the Capitol. Attempt has already been made to create a vista to the north of the Capitol on its main axis. This is fundamentally an excellent idea. Adequately and broadly treated, it would afford not only a fine view from the Capitol looking north, but with a proper and simple development would give a splendid vista of the Capitol itself from Asylum Street and the plaza in front of the railway station. We further suggest two minor vistas to the north of the Capitol, one to the right looking towards the Memorial Bridge, the other correspondingly to the left looking towards the new foot bridge to be built across Park River, leading towards the extension of Pearl Street. These vistas should be simple in their treatment and consist of broad strips of lawn or " tapisvert " between parallel footpaths. From the front of the Capitol a broad and simple treatment would be obtained with three lawn carpeted vistas, a broad one on the axis toward the Corning Fountain and Station Plaza, and two minor ones symmetrically disposed towards the two bridges across Park River. When looking at

the Capitol from Asylum Street in the neighborhood of the Station or in the neighborhood of either one of these bridges, three important vistas of the Capitol would be obtained which are now not possible, each of them a perspective combining nature and architecture and fundamentally beautiful. The two broad avenues radiating from the Capitol on the south side we shall consider under the general topic "Street Extension."

Mall.— We have already referred to the Mall or broad avenue connecting the State group with the Municipal group, and to the elementary principle of planning which calls for such a treatment. We have planned this Mall 195 feet wide, and placed it so as to leave untouched the handsome building belonging to the Orient Insurance Company. Nevertheless a certain amount of property along the southern side of Elm Street would have to be condemned. While Elm Street would become incorporated in the Mall, its position would not coincide with the roadways as planned, but would be changed. The lack of economy, however, in the present unorganized layout of Hartford's chief monumental buildings, as well as the undesirable and unæsthetic element attached to such a chaotic condition, calls for a far-sighted policy of municipal planning, and will show, we feel sure, the necessity of such an evident and fundamental improvement.

Steps have already been taken to fix the value of the property along both banks of Park River from Bushnell Park to Main Street with a view to its acquisition by the city. Citizens of Hartford are familiar with the reasons for the desirability of such a project. They have in the conditions before them the evidence necessary to convince them every time they cross the Main Street bridge. In our plan we propose dividing the Mall into two avenues at the point where the park ends at present; the avenue to the north having its axis located in such a manner that if prolonged in a westerly direction it would be in line with the dome of the Capitol, and if prolonged in an easterly direction would center on the west façade of the new Municipal

View from the State Capitol looking eastward toward the site of the New Municipal Building.

Dresden — Zwingerhof.

Hartford has a chance here for a similar fine formal treatment.

Wells Street, looking toward Main Street.
Daniels' Mill in right foreground.

Madrid — Terrace, Pool and Fountains in Park.

An attractive effect is obtained simply by the combination of trees and water. Hartford has several such opportunities.

building; the southerly avenue would be placed in a corresponding position with regard to the axis of the Mall. Taking advantage of the fall of the river at this point, we have suggested a pool or basin between these two avenues with some cascade treatment at its western end. This pool, on the axis of the Mall, would produce a most pleasing effect either looking east from the Mall toward the Main Street bridge, or looking west from this bridge toward the Mall and the Capitol in the background. It is our opinion that this is essentially a practical suggestion and that this improvement is of that character which with the power of excess condemnation would pay for itself in a very short time, as the property would be acquired to the south of the Mall and restricted if necessary, and resold, and would be so greatly enhanced in value, and the effect of this Mall would improve so much other property in the immediate neighborhood, or property which would be affected thereby, that it is our belief that the scheme may be considered as financially possible and sound; moreover it would seem to us that the State might, and very properly should, bear either the whole or a very large part of the expense.

Terrace Park.— Overlooking Bushnell Park to the west is located the present High School building, to which is shortly to be added the new Technical High School, the whole to form a splendid educational group bounded by Hopkins Street, by Broad Street, and by Farmington Avenue. Lessening the sharpness of the curve of the railroad around this hill would bring the tracks nearer to Hopkins Street. We suggest that Hopkins Street be moved to the south and east as far as possible, paralleling and overlooking the railroad; that whatever remaining land there be between the railroad and Hopkins Street, as it now runs be acquired by the city as parking. This land would serve as a recreation ground for the High School, and properly laid out in walks and paths would become a handsome terraced park with an extended view of Bushnell Park and the Capitol, permitting in turn from Bushnell Park a clear view of the High School group.

Municipal Playground.— A very large proportion of the extensive area bounded by Asylum, Sumner, Collins, and Garden Streets is public or semi-public property occupied in part by the American School for the Deaf, and in part by the old reservoir of the Hartford Water Works. This is far too large a block, located as it is so near the center of the city, to remain unimproved and not to be utilized for a playground, park, or other useful purpose. We propose therefore,— *First:* — To carry Broad Street across it from south to north in the form of an avenue ninety feet wide, with trees on either side to connect with Garden Street at its junction with Collins Street. By this means a direct and beautiful avenue would be obtained from Goodwin Park on the south to Keney Park on the north if Broad and Garden Streets, at present too narrow to form this new avenue, were broadened sufficiently to render this avenue adequate for its new purpose throughout its entire length.

Second: — We suggest continuing Church Street, from the point where it intersects Spring Street, across to Garden Street, then across the large block in question, crossing Sumner, Huntington, and Sigourney Streets to Willard Street to connect with the east end of Townley Street; connecting the west end of Townley Street with Woodland Street at the corner of Asylum Street, would give a through east and west thoroughfare from Main Street to the outskirts of the present city.

In connection with the development of this block, we also suggest the removal of the reservoir which has now become obsolete. The earth thus obtained will be of great service for grading in carrying Asylum and Church Streets over the tracks.

It will be noticed that on our plan of the center of the city at the scale of 100 feet to the inch, we have suggested the use of these public grounds as playgrounds. It seems to us that this would be an excellent location for a development of this kind, being geographically near the center of the city and in close proximity to the high school group.

View looking west from Main Street Bridge toward Capitol.

Dijon — France. Public Square and Basin.

Another similar arrangement of planting about a pool. Park River offers many opportunities such as this.

Vacant lot at corner of Asylum and Hopkins streets.

St. Germain — Terrace and Railroad Bridge.

This picture shows the railroad approach to the town of St. Germain — *en laye*, through a park, and demonstrates that such an approach need by no means be unsightly.

The Shaded Areas Show Territory Affected by Proposed Extension and Development

GENERAL PROGRAM OF STREET EXTENSION.

THE CENTER OF THE CITY.

In general an extensive scheme of street extension has been suggested by the Commission on City Plan. Wherever these suggestions affect the laying out of Bushnell Park and the new development of the railroad, together with its station, they must be primarily and carefully studied with reference to the same.

The main considerations underlying all good City Planning as far as streets are concerned, whether picturesque or formal in character or a combination of both, are:

Convenience.— Primarily a street is a means of circulation and as such should afford the most direct connection between any two given points, and the width and treatment of the same should in all cases be adequately proportioned to the traffic which it is to serve. The mistake has often been made in cities, such as Cleveland, of making all the streets very wide, thus wasting space and increasing the cost of maintenance, whether for repairs, cleaning, or policing and sometimes producing a dreary appearance because of the lack of proportion between the use of a street and its width. Narrow streets as secondary streets are desirable. Wider streets should be confined to traffic arteries and the widest streets to main lines of circulation.

Safety.— Secondly, a street may, and should, where traffic warrants a certain width, serve by its very width as a fire stop, and protect the city from such conflagrations as have devasted even within recent years cities like Baltimore and San Francisco.

Health and Beauty.— Thirdly, the public health is influenced and almost controlled by the proportion of voids and solids — the proportion of adequate light and ventilation to the built-up space. Likewise this question of voids and solids is the basic principle on which Municipal Art rests and is the foundation of whatever æsthetic value the city's plan may have.

We have described the conditions which govern the plan of a modern city and find that the most important element in

planning a new city, or in laying out a general scheme of improvement and street extension in an already existing city, is the establishment of the main arteries of traffic, the streets, which from the nature of the city's development, will become, or have become, the most congested, and the determining of the proper and feasible width and treatment to give such streets or avenues. Next in importance are the secondary and crosstown streets, and finally come the minor streets and alleys. Hartford's present street system offers numerous opportunities of connecting existing streets to form obviously necessary through-streets. Many of these combinations are so obvious that it is more than surprising that they have not been already accomplished. We have constantly endeavored to arrange our suggested improvements in such a way as to take advantage of these almost completed thoroughfares.

We will consider first, the existing streets in Hartford with suggested widening or extension.

Asylum Street.— We have already pointed out how, through the peculiar growth of the Western section of Hartford and the lack of parallel streets, this street has become the most congested thoroughfare in Hartford, and we have suggested two remedies, namely: widening the street by arcading of the sidewalks, or setting back the building line on one or both sides of the street. Each delay in attacking this problem renders it more expensive, as the natural growth of the city is daily increasing the real estate values along Asylum Street. In Berlin it has been established to a nicety just what effect increase in population has on real estate values, and the Germans, with their love for careful research and statistics, have determined that the property value of Berlin is increased 1,000 Marks ($250), for each emigrant entering the city, or for every increase in inhabitants by birth over death rate. Whether this street be widened by the establishment of new building lines, or by a system of arcading, an immediate decision should be made.

Main Street.— The city of Hartford is to be congratulated that her main business thoroughfare is of adequate width.

Until the press of traffic demands it, we recommend that the sidewalks should be kept as wide as possible.

Pearl Street.— The extension of Pearl Street has already been recommended and described in the chapter devoted to the center of the city. The present width of this street is sufficient to accommodate the traffic for some time to come, but in view of the fact that even when Asylum Street is widened it cannot be made as wide as the traffic conditions would ultimately require, we strongly recommend that a new building line for a much wider Pearl Street be established by the method suggested in another part of this report, of gradually setting back as new buildings are erected, so that eventually the widening will have taken place with the least possible disturbance and expense. This street as it exists today is wide enough to take care of traffic.

Church Street.— The extension of Church Street has also been discussed in the Chapter on the center of the city. It will be seen that we have recommended the widening of this street. We strongly urge immediate consideration of the extension and widening of this thoroughfare. An extension of this street and of Pearl Street is the obvious means of solving the problem of east and west congested traffic, and the sooner such an improvement is undertaken the less costly it will be.

Ford Street, Jewell Street, and Wells Street.— We suggest that Ford Street be widened to eighty feet, and that Jewell Street be widened to seventy feet. This is easy of accomplishment on the river side and will form part of the Park River Boulevard described later under the heading of Boulevard and Park System. Wells Street is incorporated in the general layout of the Mall, which also calls for the acquisition of some additional property on the north side of this street.

High Street.— This street, forming the main outlet from the railway station to the north, should be widened sufficiently to accommodate the street car tracks which will sooner or later have to be placed thereon. We believe that this improvement is either contemplated or actually under way.

Spruce Street.— The suggestion has already been made, we believe, to continue Spruce Street at a low level and parallel to the tracks of the New England Railroad, swinging around to the north and west and to run into Ashley Street. The utility of such an improvement is evident, for by this means a through trucking thoroughfare will be obtained running to the western part of the city avoiding the steep grade, and materially lessening traffic on Asylum Street. Such a street would enable traffic restrictions to be applied to Asylum Street.

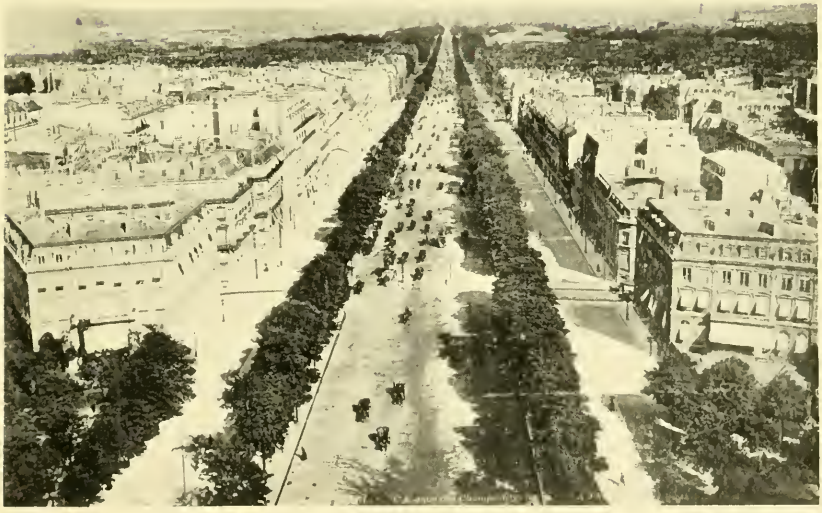
Morgan Street.— This street is the natural approach to the Connecticut River Bridge for all of the northern section of Hartford. For this reason, and also on account of the fact that it is on the axis of the bridge, it should have sufficient width to give a clear passage to and view of the bridge and should have a line of trees along each side. With a proper treatment of the focal point at its junction with Main and Windsor Streets and Albany Avenue, a vista in both directions would be obtained and Morgan Street would become an ornament to this part of the city, immensely improving a section which, without some radical treatment, will tend more and more to become a slum and tenement district as the city grows in population. This splendid bridge far surpassing in convenience, permanency, and beauty any other bridge of the same character in this country, demands and deserves that this improvement should be made.

In connection with this Morgan Street improvement, we recommend that a new street be cut through, from the circle at the west end of Morgan Street running in a southwesterly direction, to join with Church Street at the corner of Trumbull Street.

Albany Avenue.— This street, where it runs out of Main Street, of which it is a continuation, is too narrow and should be widened as far as East Street.

Capitol Avenue.— We have already spoken of Capitol Avenue in connection with the improvements to take place in and about the State Capitol grounds; and have urged that the street be kept as at present located where it passes the Library

Looking eastward down Morgan Street from Main Street.



Paris — Champs Elysées.

This view shows the beauty of an extended vista with tree-planting in rows.

Looking westward in direction of Union Station from the corner of Morgan and Main streets.

Paris — Corner formed by two radiating streets.

A triangular plot at the corner formed by two radiating streets becomes an excellent site for a monumental building. Notice the tree-planting in the heart of the city.

and Capitol. In order, however, that this street may serve its true function, it should be extended west across the North Branch of Park River, and should join into the new Boulevard running to West Hartford. By this means a through east and west street south of Farmington Avenue and parallel to it, would be obtained. This thoroughfare should also be widened between Trinity and Main Streets.

Buckingham Street.— This street should be continued to the west and back of the Library, at least as far as Oak Street. In this manner the Library would occupy an entire block, and its grounds could then receive adequate and fitting treatment.

Walnut and Chapel Streets and Homestead Avenue. — We suggest connecting the western end of Chapel Street with the eastern end of Walnut Street. Homestead Avenue is in reality the continuation of Walnut Street, but the jog at Garden Street, destroying the continuous character of this street and making an awkward turn at this point, should be removed. With this improvement carried out, a through thoroughfare, leading from the center of the city northwest to the city line will be obtained, and therefore this street throughout its entire length should be made wide enough to accommodate the traffic that such a through thoroughfare will have to bear.

THE NORTH SIDE.

Windsor and Bellevue Streets.— These streets should be continued northward to intersect Windsor Avenue. In our plan we have shown these streets extended in connection with the layout of this considerable tract of ground between Spring Grove Cemetery and Keney Park. In connection with this extension, Windsor Street should be carried over the railroad to avoid the grade crossing which now exists.

Village Street.— The portion of this street which exists between Pleasant and Avon Streets could be eventually closed up, and the street should be continued in the direction it takes

as it leaves Morgan Street Circle, and should be carried, eventually, out to the city line. It would then form one of the main thoroughfares in the developing of the great district east of the railroad. In another part of this report we have pointed out how this section, with a proper development, might become a new manufacturing district. The extension of this street above flood level and approximately parallel to the railroad, would immediately render available for factory sites the strip of land between it and the railroad.

Pequot Street.— This street should be continued west to Windsor Street.

North Front Street.— This street should be continued under the new Boulevard which, we suggest, should follow Pleasant Street, and should run parallel to and east of Market Street. Such an extension would materially assist the trucking in this new freight district.

Donald Street.— Donald Street should be continued to the north to join Windsor Street at the corner of Canton Street, and should be continued to the south to Avon Street. This, in connection with the other improvements that we suggest in this district, would take care of the future increased traffic.

Ely Street.— This street should be continued to the junction of Avon and Windsor Streets to give access to Riverside Park.

Russell Street.— This street should be continued east over the railroad and prolonged, to assist in the eventual development of the North Meadows.

Sanford, Nelson, and West Clay Streets.— These three streets should be joined. The logical connections of the already existing streets in this section to the north of the city would form the first step in the thorough development of this section. On our general plan of the City of Hartford, at 1,000 feet to the inch, we have suggested a more or less extensive layout for this district.

Capen and Warren Streets.— The east end of Capen Street should be joined to the west end of Warren Street.

Elmer and Loomis Streets.— The east end of Elmer Street should be joined to the west end of Loomis Street.

Westland Street.— This street should be continued east across Windsor Street into the New Meadow section to form a main east and west thoroughfare.

Mahl Avenue.— Mahl Avenue should be carried west along the north side of the Catholic Cemetery across Garden and Vine Streets and into Greenfield Street running along the south side of Keney Park. This would provide a direct cross-town street between Windsor and Blue Hills Avenues, one and one-half miles out from the center of the city, and form an important element in the development of a district eminently suitable for moderate priced residences. We understand that this improvement is already under consideration.

Garden Street.— We have already spoken of Garden Street as forming part of Hartford's principal north and south avenue, running from Goodwin Park on the south to Keney Park on the north. We therefore suggest that Garden Street, from the point where it intersects Westland Street, be carried diagonally to the entrance of Keney Park, at the intersection of Barbour Street and Tower Avenue. From this intersection, we suggest that another avenue be carried in a southerly direction, forming an angle with Barbour Street, symmetrical and approximately equal to that made by Garden Street with Barbour Street, to join with Windsor Avenue at a point about three hundred feet to the north of Sanford Street. This diagonal avenue will give a ready and convenient access to Keney Park from all that section of Hartford lying to the south of its junction with Windsor Avenue.

Sigourney and Vine Streets.— By connecting the northern end of Sigourney Street with Vine Street, at its intersection with Raymond Street, and by continuing Sigourney

Street to the south and across Pope Park to Park Street, we procure a second north and south street approximately parallel to Broad and Garden Streets, connecting Pope and Rocky Ridge Parks on the south with Keney Park on the north. Vine Street should be continued to the north to the city line.

In General.— We have suggested on our plan the lines of future street development in this entire district to the north of the Central New England Railroad. It is hardly necessary to call attention to the numerous advantages that such a district offers for residential purposes. Rendered accessible by through streets, such as we have suggested and attractive in its subdivision by an informal plan of streets, which has proved so successful in similar developments in Germany and England, it should rapidly become a district of homes, with the splendid existing park, so readily accessible on the north.

THE RESIDENCE SECTION.

Between the Central New England Railroad on the north, and the New York, New Haven & Hartford Railroad on the south, and on the west side of the city, lies Hartford's main residential district, the "Residence Zone." In our general scheme of proposed improvement for the center of the city, we have discussed the extension of Church and Pearl Streets, and the widening of Asylum Street. This residence district, with the exception of the lack of through streets to the center of the city, and one or two undivided private tracts, has a plan which needs little modification, except, again, the obvious joining of certain streets. The extension of some of these streets has been prevented because of the accidental placing of certain buildings directly in the line of possible street extensions. While it is not our intention to suggest the immediate removal of existing buildings in order to carry through a logical street system, we wish to again call attention to the future of this part of the city, and to strongly urge that at least large unoccupied tracts of land be divided, or a system of division be adopted for them which will fit in with the organized plan of the greater city of

the future. Hartford is undertaking improvements which are bound to develop the city. It should make such improvements as will take care of this development.

Niles and Fern Streets.— The most evident improvement in this district is the connection of the western end of Niles Street with the eastern end of Fern Street, providing a street between Farmington Avenue and Asylum Street, running through to West Hartford.

That ready access may be had to this new thoroughfare at its eastern end, Niles Street should be continued east, diverted sufficiently to escape Trinity Church and St. Joseph's Cathedral, to run into Asylum Street.

Hawthorn Street.— Hawthorn Street forms part of the Pearl Street extension. It ends at present at the north branch of Park River. A bridge should be carried across Park River, and Hawthorn Street should be continued to Warrenton Avenue, with a curve in it sufficient to carry it around the main building of the House of the Good Shepherd. We also suggest that at the point between Laurel and Forest Streets, where Hawthorn Street turns towards the north, a new street, or rather a second continuation of Hawthorn Street, should be carried southwest and across the north branch of Park River, to join the eastern end of the Boulevard running into West Hartford. The utility of such an improvement as this seems too evident to call for any explanation.

Sumner Street.— Sumner Street should be continued south across Asylum Street and Farmington Avenue to Hawthorn Street extended. Such an improvement will subdivide this undeveloped district. An additional street parallel to the above, west of it and with its axis in a line with the centre of the south front of St. Joseph's Cathedral, would complete such subdivision and render available and convenient this large area.

Columbia Street.— This street should have a narrow street running perpendicular to it at its southern end, to connect this southern end, as well as the two alleys east and west

of Columbia Street and parallel to it, with Park Terrace on the west and Putnam Street on the east.

Elizabeth Street.— We recommend that this street be prolonged in an easterly direction to run into Asylum Street, and that it be prolonged in a westerly direction along the south side of Elizabeth Park to Prospect Avenue.

Sherman and Lorraine Streets.— These two streets should be continued north to Asylum Street. Such an extension would open up a large unoccupied district to the type of high-class residences that is rapidly filling up this quarter of the city.

Carpenter Street.— This street should be continued to Prospect Avenue.

Greenwood Street.— This street should be continued south, across the La Sallette College grounds, to Kibbe Street.

Beacon, Pike, and Cherry Streets.— By connecting the west end of Cherry Street with the east end of Pike Street, and the west end of Pike Street with the east end of Beacon Street, another through thoroughfare would be obtained to Prospect Avenue at the city line.

Natalie Street.—This street should be continued east to Ashton Street.

Heath Street.— This street should be continued north to the Boulevard.

Westbourne Parkway.— In connection with the development of this northwestern section of the city, we have suggested the carrying of Westbourne Parkway northwards to the city line and parallel to the New England Railroad. This will form the backbone, as it were, of the new development which is bound to come in this most desirable district.

In General.— As we approach the extreme western section of the city, the blocks become larger, and it is here that we find frequent large and undeveloped areas. If a general scheme is adopted for the development of these districts at this early date,

with proper foresight, and with due regard to the highly organized system of modern municipal life, it should be so devised that, no matter how crowded this district may become, it will always provide amply for through and local traffic. With this in view, we suggest a subdivision of the large tract of property contained between Woodland and Asylum Streets and Prospect and Albany Avenues. It has already been recognized that the property around Elizabeth Park is extremely desirable for residences. This park, therefore, should have a street encircling it. When we look at Park Lane in London, and at the Thiergarten Strasse in Berlin, or Upper Fifth Avenue in New York, we see what such a street becomes in a large city.

THE INDUSTRIAL SECTION.

Hartford's great manufacturing section lies in the southwest corner of the city. The railroad approaches the city from this direction. It is therefore evident that as manufacturing increases, factories will continue to be erected and to spread to the southwest, calling for a convenient and efficient system of sidings, in order that materials may be easily and economically delivered, and that the finished manufactured article may be just as easily and economically shipped. It may be unfortunate, that the chief manufacturing district has grown up in that quarter of the town over which the prevailing wind blows towards the city. Considerable emphasis has been placed on the question of the smoke nuisance in Hartford. In general, it is desirable that a manufacturing district be placed in that quarter of the city from which the smoke would be blown into the open country. However, it is too late in the city's development to make so radical a change as to move its manufacturing district, for this does not alone mean moving the factories, but moving the homes of the operatives, and all the retail business that goes with the workingman's life. However, as the city develops, and property at its centre becomes more and more valuable, manufacturing will be forced, through the increased value of real estate, to move to the remoter districts. In Berlin,

this has been accomplished by legislation restricting the centre of the city, within a certain radius, against forms of manufacturing which would act as a nuisance in this regard.

Along the line of the railroad, as it leaves the city on the northeast, is a district eminently suited for manufacturing, offering even better railroad facilities than the present factory district and located in close proximity to the new freight terminal. Should the city adopt a policy farsighted enough to anticipate and provide for a population many times the present one, it would be forced to develop the meadow land of the present wards, 2 and 7. In that case, ward 2 would become the ideal location for a new manufacturing district.

As it is, Pope Park forms a splendid breathing space in the centre of the present manufacturing district. The land situated to the south of Pope Park, and to the west of Rocky Ridge Park, should be developed in such a way as to provide ample and reasonable plots for working men's homes. In Germany, that great European factory, where municipalities have gone further towards solving housing conditions than in any other country in the world, the cities have acquired and developed on the co-operative system large tracts of land to provide homes for the working classes, and to bring these same people into closer contact with the soil and with nature. This seems a much more sane and healthy solution of the problem than any scheme of municipal tenement houses can offer. A system of streets, creating small blocks, the streets in themselves not so broad as to occupy an undue percentage of the ground, to be subdivided and served by a logical system of avenues and through thoroughfares, should be devised. Such a layout as this affords the opportunity of selling small plots of ground, and when these same streets are laid out on an informal but carefully studied plan, there is ample opportunity for an attractive and picturesque effect. Hartford today is going through a stage of the two, three, four, and six family house. This is one degree better than the tenement, in that it gives each family light and air on at least three sides. However, it does not give any one family exclusive right to a plot of

ground. The housing problem is so far-reaching, and under our present laws so difficult of solution or modification, that it is hardly the province of a preliminary report, such as this is, to go into an elaborate discussion of this subject.

In our general plan and typical layout, we have suggested a more or less comprehensive layout for this part of the city. We suggest the extension of the following streets:

New Britain Avenue.— This important thoroughfare is one of the main approaches to the city of Hartford, and such provision should be made for its future widening that it may afford even more ready access to the middle of the city. It should be carried east across the corner of the grounds belonging to the Hartford Retreat and run into Maple Avenue.

Affleck Street.— This street should be continued south to join on to the new Inner Boulevard, to which we will refer later in our Chapter on the Boulevard and Park System.

Grand and Riverside Streets.— These two streets should be connected, and Grand Street should be prolonged to the east to form a through cross-town street.

Madison and Jefferson Streets.— These two streets should be continued to the west to meet Affleck Street extended.

Douglas, Gilman, and Bodwell Streets.— Douglas and Gilman Streets should both be prolonged to the east and to the west. Bodwell Street, prolonged to the west, should run into the junction of these two streets, and from the junction of these two streets on the west, a new street should be cut through westerly to Maple Avenue.

McLean and McKinley Streets.— These two streets should be prolonged to the north to join with Bodwell Court.

Zion Street.— This street should be carried south along the west side of Rocky Ridge Park, to run into Fairfield Avenue at White Street. This would give a through street, parallel to Fairfield Avenue and Summit Street, running along the low side of Rocky Ridge Park. It should be one hundred feet wide.

George Street. — This street should be continued north to intersect Maple Avenue and south to the city line. In this manner, the extremely long blocks between Campfield and Franklin Avenues would be subdivided. We understand this improvement is under way.

Warner Street. — This street should be continued to the west to intersect George Street continued.

Whitmore and Crown Streets and Earle Avenue.— By connecting the west end of Whitmore Street with the east end of Crown Street and the west end of Crown Street with the east end of Earle Avenue, a through crosstown thoroughfare would be obtained in this rapidly developing district.

Preston Street. — This street should be continued west to Broad Street.

Bushnell and Clifford Streets.— The west end of Bushnell Street should be joined to the east end of Clifford Street to form a secondary crosstown street in this district.

Campfield Avenue.— This street should be continued on south to the city line, along the east side of Goodwin Park, and made of sufficient width to take care of the through traffic which it will have to bear as the city is developed toward the south. We understand such an improvement is projected.

South Hudson Street.— This street should be extended to Franklin Avenue.

THE SOUTH AND EAST SECTION.

Hartford has developed very little toward the southeast. The greater part of Ward 7 is occupied by Colt Park and by meadow land. A large part of this meadow land is more or less protected from inundation during flood time by the Valley Division of the New York, New Haven & Hartford Railroad. To the north of Colt Park a secondary manufacturing district has developed, and it is here that are located the city's public service plants. It seems, therefore, probable that whatever

development takes place here, will be commercial in its character, as it is out of reason to expect that Hartford will much longer continue to neglect such easy and inexpensive means of transportation as is offered by the navigable Connecticut River. Land so very near the center of the city must be reclaimed and developed sooner or later. Here again Hartford is fortunate in not having to alter and readjust an already existing ineffective street plan. The remoter districts to the south of Colt Park should be developed so as to provide homes for the working men who are employed in the manufacturing and public service plants in this district or in commerce. This whole district to the south of the city would thus become a new residential district for the laboring classes.

Arch Street.— Arch Street should be continued parallel to Park River, to the point where Park River broadens out into a basin at its junction with the Connecticut River. The foot of this street should be connected with the foot of Keeney, Grove, and State Streets by a new street running parallel and close to the railroad.

Charter Oak Place.— At present this street makes an awkward turn at its junction with Charter Oak Avenue. It should be carried around the monument to the east as well as to the west, the monument thus becoming an island in the street.

Huyshope Avenue.— This thoroughfare should be continued to the northwest along the new Park River Basin to connect with Sheldon Street at its junction with Taylor Street.

Van Dyke Avenue.— This avenue should be widened to the north sufficiently to form an adequate roadway entirely independent of the railroad tracks which now run along it.

In General.— We have not as yet spoken of the east side of the Connecticut River. At present the city has no control over the vast district lying directly in front of it and across the river to the east. When the city realizes what the Connecticut River and its water front means to it, it will naturally expand

and develop in this direction. Another bridge will in time be built across the Connecticut River, and this land will develop with very great rapidity, as has been shown recently in land values on the east side of the East River opposite New York. Hartford, at the present time, has the opportunity to foresee such a development, and to foster the growth of a model and effective section of the city across the Connecticut River. We therefore suggest that all of this district of East Hartford be taken into consideration with a view of a Greater Hartford, and that the city, before it is too late, adopt a comprehensive street plan.

Focal Points.—With the problems of its complex system of streets solved, there would still remain certain points in the city's plan, where numerous streets come together which are susceptible of treatment, different in each case, but tending toward beautifying the city. We therefore suggest treatments for the following focal points:

1. At the junction of Windsor and Albany Avenues, and High, Main, and Ely Streets.

2. At the junction of Morgan, Main, and Windsor Streets.

3. At the junction of Wethersfield and Maple Avenues.

4. At the junction of Fairfield, New Britain, and Grand Avenues. There is plenty of space here belonging to the city to justify the handsome treatment of this focal point. Such a treatment as this suggests itself, in view of the fact that Fairfield and New Britain Avenues are the chief approaches to Hartford from the south, and that a splendid view is obtained from this point.

5. At the junction of Farmington Avenue and Asylum Street. The meeting of these two splendid thoroughfares is one of the most important points in the city, occurring as it does directly to the north of the High School group of buildings. This is the obvious location for a fine monument.

6. At the main entrance to Keney Park. According to our new plan three fine radiating avenues would meet at this point. This affords a splendid opportunity for a scheme of formal planting.

7. Prospect Avenue. There is a point on Prospect Avenue about 1,200 feet to the south of Albany Avenue which has a magnificent view over Hartford and the Connecticut River Valley. We suggest that a view-point be constructed here, similar to the one already existing at Elizabeth Park.

Plazas.— In our plan, we have also suggested two plazas or open squares, one in front of the Armory, and one in front of the railroad station. The plaza in front of the armory should be treated very simply and may at times be used as a parade ground; while the plaza in front of the railroad station should have a thoroughly effective monumental and decorative treatment. It is the very first important feature of Hartford, other than fleeting glimpses through the windows of a railway coach, that the traveler sees. The railway stations, with few exceptions, throughout Europe, especially throughout Continental Europe, have some adequate treatment in front of them. Even London, that most congested and unlovely of cities, has open spaces before its principal railway stations. Hartford has the most exceptional opportunity for an effective plaza in front of its station, and moreover, it has the most unusual opportunity, which when developed will offer a treatment all the more striking because of the splendid perspective that will be obtained of Bushnell Park and the Capitol Building from this point. It would be a great lack of forethought not to take advantage of this perfectly practical and fitting solution of this problem.

General Provision for Street Widening.— We recommend, in the case of all main thoroughfares, or other streets, where it can be foreseen that future widening will be necessary, that the property lines be re-established with a view of this future widening. Where the buildings now set back from the property lines, as is the case with so many of the avenues, any new buildings should conform to the new property line, and likewise where the buildings now exist on the property line, any alteration of a present building, or the building of a new building, should have to conform to the new property line. Of course in both cases the damages or benefits which might result,

would have to be adjusted by process of law. On a street like Asylum Street this would result in a gradual widening of the street, with the minimum of disturbance of existing conditions. At first damages would probably be assessed and would spread over a series of years, but eventually as the widening progressed, benefits would accrue to the property owners for which they would be assessed and the city would then reap the benefit and escape damages. In the case of an avenue like Farmington Avenue, the question of damages, or benefits, would not arise until the existing structures are altered or rebuilt, as the owners could continue to use the parking, or land, now existing between the new property line and their buildings.

THE BOULEVARD AND PARK SYSTEM — PLAY-GROUNDS.

We have already called attention to the fact that Hartford has a plan essentially radial in character, and that, through natural means, it thus has the foundation of a system of radial, traffic-bearing thoroughfares. We have explained in our paragraph on General Street Extension how these may be connected and amplified. Cross streets would of necessity become a part of any growth of this character. Existing cross streets have been laid out from time to time, as the city developed in different directions without relation to the other sections already existing or about to develop.

The convenience of a city, as it grows and spreads, is measured by the ease of circulation. With increase and growth comes a more and more definite division into "quarters" or "zones." No matter how large a city may become, the greater part of its traffic is in a direction to and from the centre, as traffic statistics of modern cities when plotted have shown. Nevertheless, the element of crosstown connection becomes more and more important with this growth. The need of this has already been felt in Hartford and several of the questions propounded by the Commission on City Plan lead to the solution of this problem. We find, on examination of the city, that by

means of widening and joining certain existing streets, Hartford may create radial and circular boulevards which will not only solve the crosstown problem, but will act as fire stops, and, at the same time, unify her Park System.

Hartford rejoices in a splendid series of parks, of which it is justly proud. These gifts of land, from its distinguished and public-spirited citizens, have been made at different times and occur in unrelated spots in and about the city. We say "series of parks," for as yet Hartford has no Park *System,* although it holds within its borders the elements necessary to develop such a system such as falls to the lot of few cities.

Bearing in mind, therefore, its unsolved crosstown problem and its unrelated parks, the joining of which is but another phase of this same problem, we recommend that the following avenues or boulevards be created.

Two Radial Avenues.— On our large scale plan of the city, we have suggested two radial avenues, each one hundred and twenty-five feet wide, with trees and parking, and each having its axis in line with the dome of the Capitol, ensuring a fine vista throughout its entire length.

The first of these avenues should run in a southwesterly direction from the junction of Hungerford Street with Capitol Avenue, cross Broad, Lawrence, Babcock, and Putnam Streets, to Pope Park, and across the Park, curving to the south until it would run into the Grand Street extension at the bridge suggested across Park River at this point. Such an avenue as this would serve as a connecting link between Bushnell and Pope Parks and materially assist traffic between the centre of the city and all of the great manufacturing district lying to the southwest. This street may be laid out in such a way as to escape all buildings of any importance in this district.

The second of these avenues should run in a southeasterly direction from the junction of Trinity Street and Capitol Avenue across Buckingham Street at its intersection with Cedar Street, then across Wadsworth, Hudson, and John Streets, to run into the focal point at the junction of Maple,

Retreat and Wethersfield Avenues and Main Street. This avenue also would escape important buildings.

Both of these avenues would become important crosstown arteries of traffic and would, in a measure, complete the radial system of the city's streets. Each of them would have a splendid vista of the Capitol at its end.

Inner Boulevard.— With but few connecting links to be made, Hartford already possesses a street encircling Bushnell Park and the centre of the city, at a distance of from one-half to one mile. Certain existing streets will have to be widened, a few will have to be prolonged, in order to acquire this broad crosstown boulevard. On our General Plan of the City, we have found that the most convenient and logical place for this street to leave the shore of the Connecticut River — itself treated as a boulevard — would be directly below the junction of the Park River with the Connecticut. This Inner Boulevard then should run north on Charter Oak Avenue to Wyllys Street and along Wyllys Street widened, to the focal point at the junction of Maple, Retreat, and Wethersfield Avenues. From this focal point it should follow Retreat Avenue to Vernon Street. Then running west along Vernon Street widened, it should run into Summit Street and turn down Summit Street to Pope Park, and across Pope Park to join Laurel Street at its southern end. It should then follow this street to Niles Street. Two short links should be constructed here, connecting the north end of Laurel Street with the south end of Atwood Street, and the north end of Atwood Street with the south end of Cabot Street. These links should be constructed to the full width established for the Boulevard. From the north end of Cabot Street this new Inner Boulevard should now turn to the east and join on to the west end of Mather Street. Mather Street should be widened. From the east end of Mather Street, the Boulevard should cross Windsor Avenue and run in a southerly direction to the north end of Winthrop Street over a new bridge crossing the railroad, and along Winthrop Street widened, to Pleasant Street, and along Pleasant Street widened

to finally join the Connecticut River at the northern end of Riverside Park.

This Inner Boulevard would serve Hartford as its first Belt Line and would give easy cross-town communications for the several quarters of the city. Together with the two Radial Boulevards already recommended, it would unify Hartford's Inner Park System, relating by lines of nature, Bushnell Park, Colt Park, Rocky Ridge Park, and Pope Park, and passing in its route not only these four parks, but also grounds of semi-public character, such as those of the Hartford Retreat and Trinity College.

Outer Boulevard.— This Boulevard should start from the present corner of Wawarme and Van Dyke Avenues, following the line of Meadow Road to the point where this road turns to the west. From this point the Boulevard should swing in a curve toward the west to join Roosevelt Street at Wethersfield Avenue. From the west end of Roosevelt Street it should swing in a curve and in a northwesterly direction to the north-east corner of Goodwin Park at Campfield Avenue. It should then cross, still in a northwesterly direction, Limmoore and Ridgewood Avenues, to join Maple Avenue at White Street. Then, running still in a northwesterly direction, it should join Roxbury and Earle Avenues at their intersection, and run into the new focal point at Fairfield and New Britain Avenues. From here it should run through the intersection of Flatbush Avenue and Hillside Avenue, to the intersection of Bonner Street and Bartholomew Avenue, at a new bridge across the south branch of the Park River. Then, swinging slightly to the north it should join New Park Avenue at its intersection with Kibbe Street, and, crossing Grace Street, join on to the south end of Smith Street. It should then follow Smith and Whitney Streets to Elizabeth Park and along the eastern side of the park to join into Scarborough Street, or Boulevard, as it really is, at Asylum Street.

Scarborough Street forms an already existing link in this outer chain. From the north end of Scarborough Street this

Boulevard should continue across the north branch of Park River and Keney Park, crossing the Central New England Railroad tracks, and swinging slightly more to the east to reach the intersection of Tower and Blue Hills Avenues. It should then follow Tower Avenue east to Windsor Avenue and after crossing Windsor Avenue and the railroad, swing in a southeasterly direction until it reaches the Connecticut River and Riverside Park extended, at a point one-half mile above the railroad bridge, joining here the Parkway which we have suggested in our plan and to which we will refer again later.

This outer Boulevard would form a second Belt Line and would join in its course, Colt, Goodwin, Elizabeth, and Keney Parks. The greater part of this proposed parkway is easy of construction, if provision is made for it immediately, and future sub-division of property is made to conform with its projected layout, for it runs for the most part through districts not as yet completed or built upon.

Park River Boulevard.— The two branches of the Park River should each form, eventually, the centre of a double roadway from the Outer Boulevard to the point where they join. From there on, through the city, each bank should receive a dignified treatment with parallel roadways and retaining walls, to the junction with the basin at the Connecticut River, except for that portion between Pope Park and Bushnell Park, where the river flows through the manufacturing district and under the Armory Plaza. This stretch, or gap, in the Park River Boulevard is spanned by the proposed radial boulevard running in a northeasterly-southwesterly direction between these two parks. We have shown on our plan of the centre of the city at one hundred feet to the inch, the treatment we recommend for this river as it flows by Bushnell Park. East of the Main Street bridge, and between this bridge and the Connecticut River, all the land along both banks of the river and between the river itself and Arch and Sheldon Streets, should be incorporated in this improvement, Arch Street being continued parallel to the river, and around the basin to join the Connecticut River Boulevard.

This land today carries some of the worst improvements Hartford possesses. In this way, the Park River becomes a thoroughfare susceptible of a fine landscape treatment, of benefit to the entire Municipality, and ceases to be, what it now is, an open receptacle for the refuse of factories and tenements.

The Connecticut River Boulevard.— The city has already constructed a most important link of this Boulevard, which should, eventually, run from a point where the Outer Boulevard joins the river on the north, to the point where this same Boulevard joins the river on the south. With a series of main cross-town streets, such as we have proposed above, carrying strips of green across the city, the city itself is guaranteed for all time adequate cross-town arteries, and a logically articulated system of parks. The combinations of circular routes are numerous. All quarters are within easy and ready access to fine broad avenues, leading to splendid parks.

Parks and Playgrounds.— Of these parks we shall say little. The purpose of this report is to consider the existing plan of the city and suggest improvements therein. Hartford rejoices, in a most unusual degree, in fine parks, each one with a character of its own which the city will do well to preserve. However, we suggest that Rocky Ridge Park be developed and planted. Pope Park should have more trees perhaps, and these should be planted on expert advice, and grouped in such a manner as to produce a wide, informal landscape effect.

The only park which the city possesses which has not yet received a comprehensive treatment, is Riverside Park. This park should have a broad and thoroughly worked out plan. It can be successfully laid out as a recreation park and municipal playground. This should be done on expert advice with a view to furnishing all legitimate means of amusement and recreation that a city park can offer, and we recommend a special study of the recreation parks of Chicago and Boston.

Careful investigation shows just how great a preventive to juvenile delinquency and crime the playground is. In Chicago, compiled statistics show that recreation centres reduced this

great municipal evil by 28½ per cent. within a radius of one half mile. The location of playgrounds can best be decided locally according to the layout of the school and tenement districts. We have suggested a rather extensive playground and athletic field placed in the newly developed district now occupied by the old reservoir, and in part by the Asylum for the Deaf. This would serve a very great number of pupils in the large educational centre directly adjacent. We wish to call attention to the fact that land may be purchased for playgrounds and parks and not be under the necessity of immediate development as such. The very fact that an open square or park is to be developed in the future, settles the character of the neighborhood, attracts residents and increases the value of property.

In General.— It will be necessary to approach the question of widening the existing streets, with great care, but, nevertheless, this should be done broadly. The new parts of these boulevards should be made the full width immediately on construction. This width we place at one hundred and twenty-five feet for boulevards and belt lines. Such a street may be laid out as follows: The central roadway should be seventy feet wide, double tracks in the middle requiring eighteen feet. This would leave open roadways on either side of the tracks, each twenty-six feet wide. On either side of this thoroughfare there should be an outer sidewalk three feet wide. Beyond that grass and trees twelve feet six inches wide, and beyond that again, a sidewalk twelve feet wide. This comprises the entire width of one hundred and twenty-five feet, but, following a scheme such as this, the widening may be done gradually in those portions of the city where the new boulevard is to follow already existing streets. A process of this sort may require a great number of years in its development, especially where it is found necessary to widen on both sides of the street, and it may happen that in some cases the city will be forced to be satisfied with a narrower street, but in every case, these belt lines should be made as wide as possible, for the benefit of the property owners themselves, as well as for the city as a whole.

In the residential sections, property owners with land about their houses will soon recognize the advantage such boulevards offer them. Accordingly, an ordinance, which is framed in such a way that when the majority of property owners on one side of a residence block agree on the establishment of a new building line, such a line shall become obligatory to the rest of the property holders on this block and no one may build beyond this line without the consent of a majority of his neighbors, might solve this problem.

A logical and thorough system of boulevards, which are thoroughfares widened and treated with parking and trees, gives an appearance of order and dignity to the city, of comfort and spaciousness, which will go far toward correcting a cramped feeling due to a uniform system of standard streets. A sense of security and ease, a feeling of air and openness, are themselves the prime factors in a city's claim to beauty. The green of nature, and the slight variation from perfect symmetry offered by trees and planting, are the ornament of a studied plan of streets and squares, of avenues, and parkways.

RIVERS.

It is a phenomenon of American municipal development that our cities generally neglect what European cities prize as their greatest asset — the opportunity not only of utilizing its water front for commerce, but of developing it so as to make it an ornamental and in the highest degree recreative feature of the city. The added convenience of open space for light and ventilation, with the resulting element of beauty that arises from the introduction of water into a general scheme of nature and architecture, has almost invariably been foreseen and eagerly sought after by municipalities, great and small, throughout the Old World. This has always appealed to architects and engineers where they have been called upon to lay out municipal improvements, or where they have been given the task of planning expositions, with the rare opportunity of producing a unified and beautiful architectural ensemble.

Often in such cases infinite pains and vast amounts of money have been expended to procure this element of water.

Fortunate, indeed, is the city that is built on a river. Doubly fortunate the city that is not only built on a navigable river, but also has a secondary stream flowing through its center capable of successful landscape and architectural treatment. What does Hartford do with its rivers? Like so many other American cities, it unfortunately turns its back on them. However, out of a condition of affairs such as this, arises a certain real advantage as far as our present purpose is concerned. Property values have been kept down and none but inferior improvements exist along the banks of Hartford's rivers, so that a new development along logical lines is possible of accomplishment.

As open space in a city, a river performs the same function that does a broad parkway. In order that its utility may be complete, the public should have the same access to it that it has to a thoroughfare.

Hartford today is not on the Connecticut River. Properly speaking, Hartford is *near* the Connecticut River. Had chance dictated that the city's development should have been along the banks of its rivers, we might have had to face a haphazard and unplanned layout which would have become perhaps too expensive to admit of material alteration and practically impossible to alter into an organized scheme. As it is, the value of property abutting on the rivers is comparatively low. This property should be secured as soon as possible and before its value rises too greatly. Hartford would thus be enabled to repair a mistake which the chances of city growth, fortunately, have not made irreparable.

Park River.— We find Park River at present a muddy stream of varying flow, more or less polluted by refuse from the factories and tenements along its banks. It runs through the heart of the city, but except for a stretch through Bushnell Park, the city turns its back upon this natural open space and dumps into it the refuse of its factories and back yards. Such

View looking west from Main Street Bridge.

Amsterdam — Basin and Bridge.

An attractive water front and a dignified and spacious approach to a monumental building have been made use of in Amsterdam.

View looking eastward from Main Street Bridge.

Berlin — Bridge at the end of Unter den Linden.

A small stream flowing through the heart of a city and past its fine buildings and parks may be successfully treated and made a beautiful feature.

a condition is merely a stage in the evolution of a city. The city itself has already expressed in unmeasured terms the public sentiment in this matter.

We recommend that the city obtain control of the river and all its branches as far out as the city line — not the present city line, but a line remote enough to include the Greater Hartford that must come.

The lesser streams and brooks, such as Cemetery Brook, Gully Brook, Folly Brook, and others, should be gradually enclosed and form part of the sewerage system of the city. As the city grows, small streams such as these, if left open, cannot be utilized effectively in beautifying the city or its streets, and are bound to become polluted with refuse. As a means of flushing the sewers they are of great value.

The two branches of Park River, however, are of sufficient size to form a desirable element in the general plan of the city. We therefore call attention to the obvious necessity of entirely freeing these two streams, and Park River itself, from pollution to the final junction with the Connecticut River. For this purpose all drains should be either closed or diverted into the public sewer system and sufficient land on each side of Park River should be reserved for public use, whether for thoroughfares, parks, or otherwise.

In view of the very great variation in the flow of this stream, we would urge that a series of dams be built so as to retain at all times a sufficient amount of water at a fixed level to make the stream attractive. It has been suggested that the stream might be paved with a gradual slope from each side towards the center, which would be an improvement of the present conditions. This scheme is expensive of construction and of maintenance, and does not appeal to us, and we strongly urge the construction of the dams as in every way preferable. In fact, if it should be found necessary upon further investigation to adopt some method of paving the bed of the stream, we would nevertheless suggest that the dams be constructed.

The river, having been cleaned and controlled, a consistent treatment of grass-covered banks, and retaining walls, with

roadways or paths on both sides where possible, should be adopted. Where the river skirts Bushnell Park, its treatment should fit in with the general landscape plan of this section. Opposite the new Municipal Building a terrace can be built overlooking the river. Such a treatment would form a fine approach to the whole group of municipal and other buildings on the east side of Main Street.

At the mouth of Park River a considerable level district exists which might well be excavated to form a basin for small boats with a lock into the Connecticut River. Such an improvement would not only serve the evident purpose of a small sheltered harbor for lesser craft, but would assist materially in controlling the flow of Park River, and would enable the city to maintain a given level well up the stream, even in times of comparative drought.

It is difficult to overestimate the benefits which would result from this change, not only to this section of the city, but in the aspect of the city considered as a whole. From the Main Street bridge, west, there would be a clear view of Bushnell Park with the Capitol and State Buildings in the background and the Mall and its trees and lawns in the foreground. From this same point east, there would be a clear run of river, bordered by green banks and trees, to the Connecticut River, with a roadway or park on either side. Such an open space is bound to alter the character of this entire district. Its influence would be very far-reaching in the development of a section which, through its natural advantages, and after the opening of such a natural channel of expansion, should become one of Greater Hartford's most important and attractive sections.

CONNECTICUT RIVER.

Mr. George A. Parker, your Superintendent of Parks, in an admirable letter to the *Hartford Courant,* has written:

> "One of the greatest natural gifts to Hartford is the Connecticut River. This river is the greatest single natural asset that Hartford has, yet the least used. It should be rediscovered and become the factor in our city

Connecticut Boulevard looking northward, Hartford Bridge in the background.

Bremen — General View.

This city makes use of its river and faces it. Notice the treatment of the banks of the river with streets and parks.

> life that it is waiting to be. All the lands possible along its shores should be taken for public uses and developed as needed, public docks built south of Park River and thoroughfares made to connect with them. Wawarme Avenue should be continued to New Britain Avenue; Vredendale Avenue and Sheldon Street widened to the Park River, and a lock built and basin created between Front Street and the Connecticut. Hartford must lose much of its future greatness unless it takes advantage of this great blessing that flows by its front door."

We have stated above, that Hartford was not on, but near, the Connecticut River. The city has begun to recognize this and has wisely, and with admirable foresight, made a decided and splendid improvement to correct this condition of affairs. The Bridge will be for all time a monument to be proud of, and Connecticut Boulevard forms an important — the most important — link in the development of the water-front. Riverside and Colt Parks both run down to the Connecticut River; we therefore find the city reaching out toward this river at three points. The next step, and this suggests itself naturally, is to connect these three points by a Boulevard very similar to the stretch already constructed. Thus, by acquiring all riparian rights and sufficient property, it will be possible to carry a fine broad roadway from Riverside Park on the north, to Colt Park on the south. Let the city, while the side opposite is still unoccupied, acquire a stretch of sufficient width to form a similar Boulevard with parking on the east side of the river, from the new bridge, south as far as a point opposite the spot where Park River empties into the Connecticut. The reasonableness of such an improvement is evident. Were the city to improve only the west bank of the river, the undesirable elements of the present existing development would, in many cases, be merely transferred to the other side of the river. This movement has already started opposite the new Boulevard, and shows how, by brushing her own doorstep, the dust and dirt is merely scattered on the sidewalk in front, and remains quite as con-

spicuous. The east side looks at Hartford, but Hartford has to look at the east side.

The city in carrying out such an improvement will, at the same time, necessarily have to take over the docks located here. In whatever plan of banks and retaining walls adopted, the city should provide frequent and convenient landing places for local traffic in small boats. As the city grows, the extension of a public improvement along the river would force the docks farther and farther down the stream. Why not foresee this improvement while it is still easy of accomplishment? We beg, again, to quote from Mr. Parker in regard to what he has stated about the meadows to the south of the city:

> "What might be called the 'Hartford Basin' of the Valley of the Connecticut River extends from where the river passes between the high lands near Bissell's Ferry on the north, to where it flows out between the high ground at Rocky Hill and South Glastonbury on the south, something like sixteen miles long and varying from one to two miles in width.
>
> "I sometimes wonder if people realize the beauty and possible usefulness of this great inland basin, the largest of the river valleys in Southern New England, surrounded by picturesque hills and with a tide-water stream passing into it from the sea between high hills. Its great extent makes it impossible to comprehend, as a whole, unless one can see it with their eyes shut. The favorable conditions and location of this great valley seem to indicate that it is to have a future as important as the valley is extensive.
>
> "The basin between the Hartford Bridge and Rocky Hill might be called the 'South Basin,' containing about fourteen square miles subject to overflow.
>
> "Of the basin north of the stone bridge, it will probably be many years before needed for manufacturing purposes. But it seems as if the time might be ripening for the serious consideration of the development of the 'South Basin.' This contains, at a rough estimate, 9,000 acres, and if, after improvement, one-third of its area is water there would be 6,000 acres which could be used as building sites for factory purposes.

"The elevation of these large meadows is such that they are covered with water during floods some six weeks or more. This has prevented them from being used for building purposes. Preserving them, as it were, for a larger use in the future, and also providing ideal conditions for digging wide and deep waterways for vessels to enter the different basins with freight.

"If these waterways were cut at about right angles with the trend of the valley, on both sides of the river, and about 1,000 feet apart, or at such distances as the excavation would equal the fill necessary to make the remaining land above high water, it would result in about thirty of these waterways. Some of them are over a mile long, and would give, if both sides were considered, something like fifty miles of water front for factory purposes.

"The digging of the waterways could be done from the water side by steam dredges or pumps, and the stone needed for retaining walls could be handled both at a quarry, and in building the walls, from the water sides by steam, so that the cost of all this work would be at the minimum. Under conditions, as they seem to exist, I doubt if the average cost per acre of filling the land, digging the canals, and building the walls need to exceed $2,000 per acre.

"If this work is undertaken, it should be on such a scale as would allow an economical and well-balanced plant, and if successful after the scheme was established, the sales of one year would pay expenses of the next, so that the city or state would have to do little but loan its credit and assume the responsibility for the work. It would become a direct profit to the city or state, even as the filling of the 'Back Bay' was to Boston and Massachusetts.

"As one lets their imagination picture the future of such a scheme, it looms large, and seems as if it might become a power for good. It would mean, if Hartford follows her present line of development, a city of half a million of happy, prosperous, vigorous, and skillful workmen with possibilities to make of themselves, their homes, and their children all that is in them to work out and that is what makes a city worth while.

> "I have not attempted to discuss the engineering or financial problems involved, or the legislation necessary. I have referred to Hartford as the Greater Hartford, that municipal unit that is bound sooner or later to include all of this beautiful valley from Bissell's Ferry to Rocky Hill, a valley full of delightful promises. The special blessing of a great opportunity seems to have rested upon all who have lived here in the past, and greater promises to those who are to follow. Half way between its northern and southern extremities, between its eastern and western hills, is the Hartford of the present, the nucleus of what the Hartford of the future will be."

What more economical traffic carrier may a city have than a navigable river? With keen foresight Mr. Parker has looked ahead to the logical commercial development of the Connecticut, and we most earnestly call attention to his entire report, submitted to the Commission on City Plan, on December 17, 1909.

STREET RAILWAYS.

A report of this nature can hardly go into a detailed discussion of street railways. The growth of the city and the development of new districts are the prime factors in the growth of a system of street transportation. The laws that govern street traffic in general also govern street railway traffic.

With the growth of a city, and the extension of its street railroad lines, the two questions to be first solved in the problem of street railway traffic, are congestion at the center, and cross-town traffic. With regard to the center of the city, the simplest and most effective solution of street car congestion is the loop. Hartford has a street railway loop, but it is already crowded and totally inadequate for its future needs. Such a loop receives and redistributes the cars belonging to all radiating lines, and may be increased to a certain point only, and until the limit of its capacity for handling cars is reached. When such a loop becomes too crowded, through increase in traffic, or too large to be convenient, refuge may be sought in a system of two levels — by the use of subways. In this way, street car traffic is much

more efficiently controlled and ease of motion is secured, through not having to mix with other street traffic. Boston had to face such a condition on Tremont Street, with the result that the Boston Subway was built, and while this was not the first underground street railway constructed, it was the first one built to relieve congested traffic. Hartford will probably escape the necessity of adopting any such means of relieving congested street railway traffic. It should provide, however, a more adequate loop, which will serve the center of the city, and at the same time be neither too large to be inconvenient nor too small to accommodate sufficient cars to transport the traveling population. We therefore recommend that a loop be established which will take care of and directly serve the business center, the railway station, and the main business streets, starting from the corner of Main Street and Pearl Street, and running through Pearl and Ford Streets to Asylum Street, crossing Asylum Street and the plaza in front of the station to High Street, turning north on High Street to Main Street and south on Main Street to the starting point at the corner of Main and Pearl Streets. This would remove the cars from Asylum Street and materially lessen congestion in this most crowded district.

This would become Hartford's first new Crosstown Line, and would furnish direct communication to and from the station for the north side of Hartford, and would materially relieve the center of the city from congestion, furnishing a cross-town service not only to the station, but to the high school and the great manufacturing district beyond.

The second cross-town line would be most properly placed on the line of the new Inner Boulevard. Such a line as this would thus cross all the lines radiating from the center of the city and would greatly facilitate local travel.

The third cross-town line should be constructed on the line of the new Outer Boulevard. It is probable that for some time the city will only need the section of this Outer Belt Line which would cross the more thickly occupied residential section at the west side of the city through which the boulevard passes.

LIGHTING.

Poles and overhead wires will continue to be an eyesore until some uniform system of more dignified cast metal standards is adopted, or until a conduit system is built and both electric light and power is forced underground, including all trolley service. This latter system of trolley service may not come until well into the future. Meanwhile the question of uniform and acceptable standards would be perfectly possible and easy of execution and economical, in that they would combine the city's electric light standards with the poles supporting trolley wires. Cast iron costs, presumably, the same per pound, whether it is molded in a well-designed form or in an ugly one. The initial cost of a good pattern is slight, compared with the direct effect upon the entire community that handsome standards cast in such a mould would have, so that it seems plain that this means of municipal ornamentation is one of the cheapest and most far-reaching that a city may undertake, and one of the most foolish and costly for it to neglect.

Hartford has already attacked the problem of placing all present overhead wires in underground conduits, and now has an ordinance authorizing the Board of Street Commissioners to remove the overhead wires from a maximum of two miles of streets, per year. This will eventually eliminate telephone, telegraph, and electric light poles, the latter at least as wire carriers.

The business streets in our modern cities require intense light. This is best and most economically furnished by arc lights spaced sufficiently near together to get approximately uniform illumination, or, by a combination of arc and incandescent lights, the former placed high, the latter near the sidewalk. A system such as this latter one, has the decided economical advantage, that after a certain hour, the brighter lights may be extinguished and sufficient illumination obtained from the incandescent lamps for the balance of the night.

In the residence district, however, the brilliant light is not needed, and in those streets which are shaded by trees, arc lights cast such black shadows that they are, in many cases,

Looking eastward down Asylum Hill.

Berlin — Street view.

The people of Berlin understand the value of a carefully planned system of lighting and the beauty of handsome standards.

Atlantic City — Combination electric light standard.

Atlantic City — Smaller electric light standard.

These two standards were designed to give a uniform system of lighting to the city streets.

ineffective. A low, even, mellow light is much more desirable in this case, and consequently the lamp post, coming low enough to escape the branches, and bearing incandescent lamps, is more economical and effective. At street corners it is well to place arc lamps, not only as signals, but also that they may more effectively light the turns. With a system such as this it is possible to arrange combination standards with arc lights above and cluster incandescent lamps, below, and to make intermediate lamp posts for residential or unimportant business streets, which will correspond. These will have their cluster lamps at the same height as the cluster brackets on the combination standards, producing a pleasing, uniform effect. In this manner two patterns of standards will suffice to carry the lighting of the entire city. Such a uniform system of lighting, with uniform standards, which should also carry trolley wires on those streets which have cars running along them, will go far toward clearing up and simplifying the streets. We append herewith the photographs illustrating several points in the city that will present a different appearance with this simple improvement.

It is important and most advisable in planning for the lighting of any section of the city that it should be considered both from the point of view of mere lighting as well as of its decorative effect. The best decorative effect is always obtained by simple treatment of round white globes with a yellow light, placed at frequent intervals, in straight alignment and not over twenty (20) feet above the ground, somewhat of the character of the present lighting of Bushnell Park. Nothing is handsomer as an illumination than the garland of light either side of the Champs Elysees, with plain white frosted globes, originally lighted by gas and at present by incandescent lamps. In summer, when these lights are turned on, the avenue is in gala attire. In a more practical manner, which is possible of everyday use, the same is true of Sixteenth Street in Washington, which is one of the most attractive solutions of the lighting problem where trees form a part of the perspective, and of Atlantic Avenue in Atlantic City, which we designed at a reasonable cost on essentially practical lines, with the maximum of effectiveness; the

lights being really ornamental standards, so arranged, that on special occasions they can be decorated with flags, with streamers, or with garlands of lights.

Photographs of both types of lamps mentioned above are appended to this report, as well as of several others.

TRAFFIC REGULATION — CORRECTIVE ORDINANCES.

Convenience, safety, health, and general effect in our cities may be decidedly improved by carefully planned restriction of traffic which shall work no hardship to individuals, but which, on the contrary, will materially assist safe and speedy communication throughout the city. Likewise, far-reaching improvement may be obtained along these lines by a series of corrective ordinances attacking public nuisances under which we suffer today, not only as communities, but as individuals, through an exaggeration of the idea of the rights of individuals, who, in themselves, may form a group or class, for it is a curious fact that we still remain blind to the effect that such nuisances have on us as individual citizens. In most of our cities these corrective methods, when adopted, fail of efficiency because of the leniency of the courts in dealing with offenders, which is another illustration of the undue recognition of personal rights as against the interest of the whole community, and we are strongly of the opinion that minor offenses, as well as graver offenses, in the matter of the violation of ordinances, should be dealt with severely, and that the penalty should be cumulative. A first offense may very possibly be due to ignorance and a lack of proper understanding of the personal obligation of a citizen in such matters; but repeated offenses are hardly to be condoned. Moreover, the records will show that habitual offenders are limited to a comparatively small number of citizens who should be dealt with summarily. It is, after all, somewhat a matter of public manners, and while public opinion can be trusted to establish general standards, corrective methods must be adopted to enforce these standards.

Washington — Light standard on 16th Street.

New York — Light standard on terrace of New York public library.

These are both cast standards and can be produced economically.

Until recently we have had few traffic regulations, even in our large cities. The growth, however, of system and order in our streets spread very rapidly from the moment that we realized its necessity, especially since the advent of motor transportation. General regulations, such as forcing vehicles, when they wish to stop in a street, to draw up to the side of the street, with the curb on the right hand facing forwards, and when making left hand turns to keep well from the curb, apply equitably to all classes of vehicles, and are, therefore, entirely effective. Further than this, however, it is perfectly possible to restrict certain streets against trucking, as has been successfully done in New York for years.

Hartford has already felt, in some degree, the intolerable conditions arising from congestion in some of its streets. Such congestion as this is first materially felt at the centre of the city. In Hartford, traffic conditions have reached the acute stage in Asylum Street, which street, on account of the peculiar function it bears in the present plan of the city — that of general and almost sole traffic bearer east and west — receives an unfair and entirely disproportionate amount of the city's traffic. This congestion becomes all the more aggravated by the narrowing of Asylum Street at Main Street, at the very point where it should be the widest. Through this narrow way must pass the great flow of pedestrians and vehicles that go to and from business and shopping. Widening this street and opening up parallel through-streets, will go far toward relieving it of traffic. As the city grows, however, certain streets become, for peculiar and local conditions, popular for business, and hence for traffic, and then traffic regulations immediately become necessary. With regard to Asylum Street — at least until the improvements which we recommend in our general program are carried out, so as to relieve this street of its unfair burden — even more effective measures should be adopted. This street, on account of its location and direction, being the connecting link between residence and business, should have, and will have, from the moment it becomes a convenient street, the finer forms of retail business located along the section between

the Railway Station and Main Street. We therefore look for the ultimate removal of street car tracks from this street and restrictions against trucking on this street. In its present narrow state, it might be well to consider the question of confining traffic to one direction, as a temporary means of relief only. Such a restriction is merely a compromise and is liable to lose its effectiveness and defeat its very end the moment it works a greater hardship than a congested street would offer. Or, again, it might be well to close this street entirely to vehicular traffic at certain hours — that is to say, when it is most likely to be crowded with pedestrians — at the noon hour and after five o'clock. Regulations such as these are enforced in many of the European cities, and the aspect of such a street at the crowded hour is very delightful. It becomes a promenade for the people, a municipal meeting place, with the consequent stimulus to trade in such a district.

We have called attention to these corrective measures with a view to furnishing a temporary solution to Hartford's worst traffic problem. The natural, permanent, and most effective means of obtaining this improvement, we again repeat, is by widening Asylum Street and by furnishing parallel traffic-bearing thoroughfares.

Ordinances regarding speed apply nowadays almost entirely to motor-propelled vehicles. The latest policy has grown away from the earlier, primitive requirement of an absurdly low speed limit. A reasonable speed limit, of course, must be fixed, but we now realize that it is far more effective to inflict severe penalties for neglect and disobedience of reasonable ordinances, than to try and enforce restrictions that appeal to the traveling public as absurd. Rules as to turning should be rigidly enforced and carried out. An ordinance to check smoke from automobiles is perfectly possible. Arrests for reckless driving should be unfailing, as they should be, in fact, for any clear violation of the city's ordinances.

Billboards.— Nuisances arising from congested traffic are, unfortunately, not the only ones from which we suffer. Perhaps

the most unsightly feature of American cities today is the billboard. Advertising has become a fixed feature of our business — of some branches of business it is the most important feature — and conditions indeed have reached such a stage today, that in many cases it has become a separate business itself. We cannot eliminate the billboard or the electric sign at the present day. We can control them, however. If the time comes when taxes are levied on the income-producing power of property, this source of income to the owner of property will naturally be taken into account. It has been estimated that rent received by property owners, for the privilege of displaying signs within a radius of five blocks about the corner of Forty-second Street and Broadway in New York City, is $350,000 per year. This represents a capital value of $7,000,000 on which the city receives no taxes, and this estimate was obtained before the erection of the new tower at this corner devoted exclusively to advertising. A billboard or electric sign is seen by an entire community. Is it not therefore fair that the community should have some control over what is forced on its attention? Effective billboard ordinances have been passed. Hartford has passed, or is about to pass, an ordinance controlling the manner in which posters are displayed, and under this ordinance the city is to have the right to refuse a poster on the grounds of immorality or indecency. Regarding electric signs, the city has already passed an excellent ordinance and is to be congratulated upon it. Nevertheless, such ordinances as these, while in a measure remedial, do not go to the root of the matter. The real secret of the control of this nuisance is by taxation.

The Smoke Nuisance.— Great stress has been laid upon the smoke nuisance in Hartford. The three chief producers of smoke are the factories, the public service plants, and the railroads. We have already spoken of the fact that Hartford's chief manufacturing district lies on the side of the city from which come the prevailing breezes. Until the city grows sufficiently to force this manufacturing farther toward its outskirts, it will continue to suffer from the smoke of its factories. Much

can be done, however, to abate this nuisance by compelling the use of smoke consumers and by efficient inspection. The city of Berlin has attacked this nuisance squarely by restricting the city within a certain radius against those forms of manufacturing which act as a nuisance in a congested district.

The time is not far distant when electricity will furnish all the motive power for railroads, at least within urban limits. This will solve this phase of the smoke problem in Hartford. At present the railroad as it curves around Bushnell Park and enters the city at its heart, belches the smoke of its locomotives on Hartford's finest buildings and upon her most thickly populated section. It would, therefore, be advisable to examine into the possibility of using electric or gasoline engines, at least within the city and its suburbs.

Street Noises.— In the course of municipal life, human sensibilities become more and more dulled to the effect of noise. A long-continued noise ceases to produce a direct effect on our consciousness, and it is only when the noise itself ceases that we realize, through a decided and grateful feeling of relief, the effect that it has had upon our sub-consciousness. Physicians will tell us just how great an effect this ever-increasing municipal evil has on the nervous system. Day by day the confused sound and din of our streets increases, along with the unceasing traffic. It does, therefore, seem that the time is now ripe to take measures to check it. Individual citizens have a measure of protection against noise nuisances, why should not the community as a whole protect itself against noise? Today our street cars and motor vehicles are the worst offenders. Noise runs riot in certain districts of our cities. The remedy is not an easy one. Most of the traffic-noise is due to the rattling of vehicles over the street surface, and while rubber and other shock-absorbing and, therefore, noiseless type of tires have been in use, the incentive has been one of selfish comfort and economy rather than regard for the suppression of noise and the saving of the wear and tear of the public road. It is neither impracticable nor unreasonable to compel the use of such methods,

and to prohibit any vehicle within certain city limits which is not thus equipped. Autobusses on Fifth Avenue in New York, and other heavy delivery trucks, such as five-ton auto coal trucks, demonstrate that even the heaviest vehicles can be so equipped. Likewise, either by inspection and repairs of track and wheels or by the introduction of some shock-absorbing spring or other method, steps should be taken to prevent the unnecessary rattling and noise of the trolley cars resulting from improperly constructed and maintained road-beds and from flat wheels.

Noise resulting from trolley traffic may be further reduced by carrying — where the width will justify it — the street railways in parking, with the ties in a bed of their own, rather than imbedded in the pavement. We do not speak of ordinances regulating this evil, for legislation of this sort is a delicate matter and encroaches on individual liberty to a greater degree than we, as a people, are yet willing to go. Such regulations, however, as forbidding the opening of mufflers by automobile drivers within the city limits seem perfectly feasible.

The character of the pavement is such an important factor in the prevention of noise, that residence streets should have, wherever possible, a noiseless pavement. Other things being equal, macadam or wood-block pavement are the quietest practical coverings we can give our streets. London and Paris — the two largest cities of Europe — are paved with the wood-block laid over asphalt or concrete. We call the attention of the city to this latter form of pavement, for while its initial cost is greater, it is very easy and simple to repair, a property in pavement which should appeal to us in this country who are only too apt to neglect pavements when once laid.

Wide streets are less noisy than narrow ones for two simple reasons — that the pedestrian or resident is farther removed from the average noise; and that reflected noise is less intense.

Regulations for Building Operations and Street Excavation.— The appearance of our streets is dependent to a very large extent on good pavements and on proper sidewalks,

and New York, for instance, or Brooklyn, realizes today how much the appearance of its streets has been improved within the last fifteen or twenty years with the proper attention to these important details. The same is true of a country road. The roads of Europe are not only convenient for traffic, but greatly enhance the orderly and, therefore, attractive appearance of the landscape: but it is equally important, as we have learned of late, that the streets should be kept not only in good order but as clean and free from obstruction as possible. The usual building operations are often conducted without regard either to the comfort of the inhabitants or the appearance of the streets. It is totally unnecessary that the streets should be obstructed or littered, not only with building material, but with rubbish, and in consequence thereof that the occupants in the neighborhood of a building in process of construction should be made uncomfortable and that entire neighborhoods should be made unattractive, unclean, and dusty for months and sometimes years, merely owing to the lack of proper regulations enforcing reasonable care in such matters.

We therefore urge that such regulations should be made at once as will enforce reasonable restrictions without hampering building operations. They should forbid littering a street, limit the amount of material that can be placed upon the street, and compel its being placed thereon in an orderly manner; should absolutely forbid the dumping of rubbish on the street, which instead should be brought out in barrels or other receptacles and immediately removed; and all temporary structures such as fences, tool-houses, overhead bridges, should be made sightly and left free from posters or other advertisements, as a condition of the permit. Likewise, all street openings should be regulated so that the work would proceed expeditiously, in an orderly manner, and with the least confusion or dirt, that the excavation should be filled up and the pavement be restored without unnecessary delay. We would go so far as to suggest that a permit to open a street, whether by a private individual or a corporation, or a permit to build, involving the use of any part of the street, should require a deposit in a sufficient

amount to protect the city and enable it to undertake, at the expiration of a given time, at the expense of the party to whom the permit is issued, such steps as may be necessary to remove obstructions or complete filling and restore the pavements, and even to impose a fine for neglect.

The subject of restrictive and corrective ordinances is a very broad one, and consequently cannot be treated in an exhaustive manner in a report of this nature. We have, therefore, confined our suggestions in this matter to a few of the important points that Hartford has to consider.

PRESERVATION OF BUILDINGS.

The present business center of Hartford is the City Hall Square. As Hartford expands, the higher forms of business will in all probability occupy the property on Main Street between the old City Hall and the new Municipal Building which has not already been so developed.

In this growth and the consequent increase in real estate values, the city should be very careful to preserve those fine old monuments of its earlier life that are still standing, and which are so eloquently expressive of New England traditions. Even in the push and bustle of our present essentially commercial age, we realize that these splendid relics of an intellectual past should remain as a constant incentive for the future. The City Hall is a fine old building by Bullfinch, and on the completion of the new Municipal Building, should be wisely and carefully restored with a view to its permanent preservation. Its interior arrangement today is somewhat unattractive and unpractical. The interior should be carefully reconstructed in the period of the building, and the building itself should be devoted to some adequate, dignified, and general municipal function, in order that it may remain a true expression of the spirit of Hartford. The grounds about this building contain several magnificent trees. The treatment of these grounds should be made the subject of a careful study with a view to a simple but decorative treatment of the space available for planting, a treatment of grass and shrubs that would be in character with the building

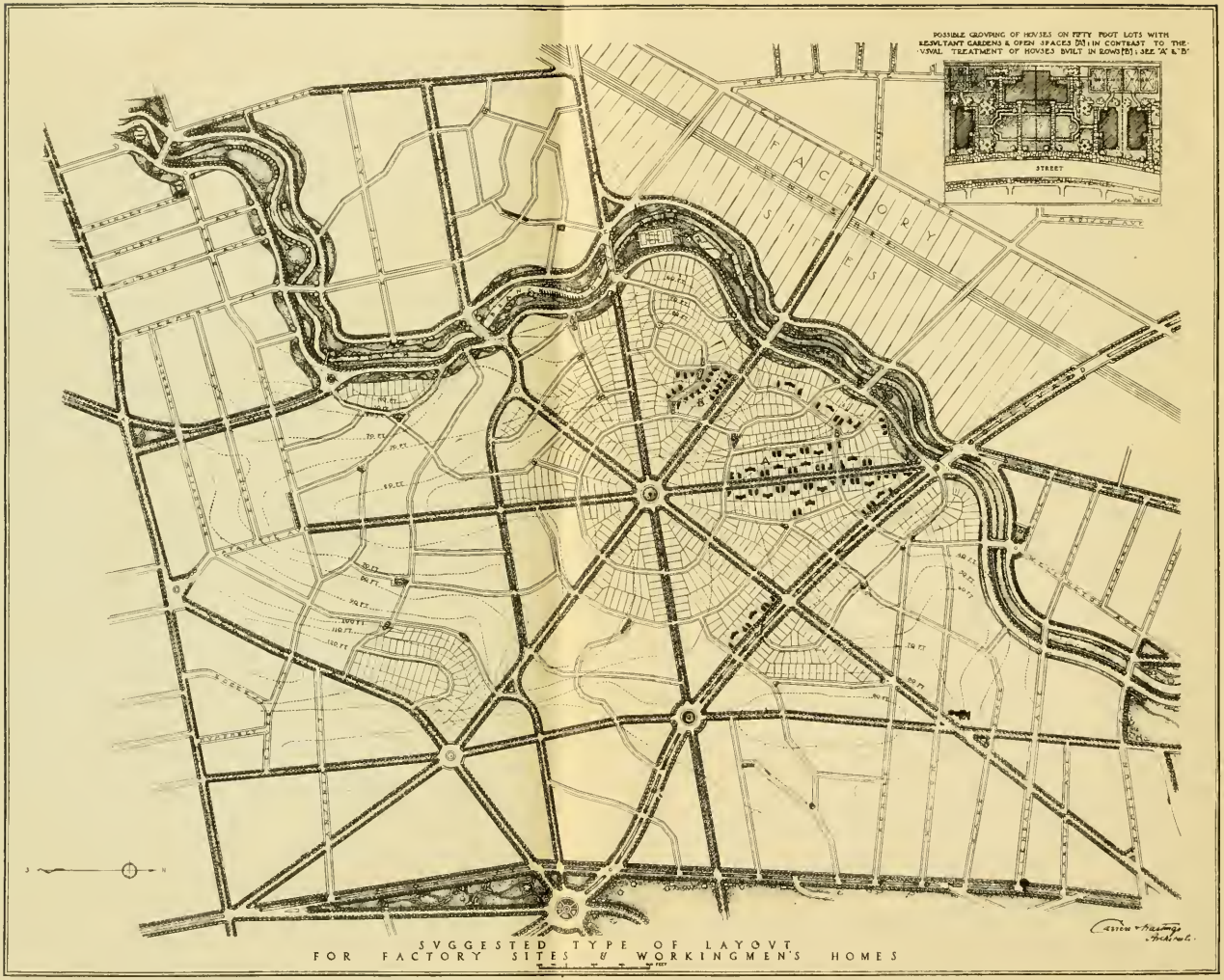
itself, and would at the same time be capable of maintenance in a district so crowded by traffic.

Besides the City Hall, Hartford also possesses several fine old churches which, with the greatly enhanced value of property and the trend of the residential development into new districts, are apt sooner or later to disappear. A serious effort should be made to preserve these landmarks which, with the old City Hall, are of such inestimable value. Endowments, or even municipal support, should retard and, if possible, prevent their loss. Think of New York City without either Trinity Church, Saint Paul's Church, or St. John's Church; or of Hartford without Center Church or South Congregational Church. Each generation owes it to the following generation to save all the remaining buildings and monuments and traditions which make the local life and history of their ancestors lovely and full of meaning.

WORKINGMEN'S HOMES.

Hand in hand with the development of manufacturing enterprises goes the question of providing suitable housing for the operatives. If such laborers can find inexpensive and attractive homes within walking or bicycle distance of their work, the most economical, and therefore the most practical arrangement is obtained, and if we can better the housing of the wage-earner, the entire community will be benefitted.

We have already spoken of the natural extension of Hartford's manufacturing district toward the southwest. There lies to the south of Pope Park a great undeveloped district, which is known as the "Allen Tract" and which has already been under considerable discussion by your Commission. For this reason we have taken into consideration the large tract of land bounded by Hamilton Street, Zion Street, New Britain Avenue, Newfield Avenue, and the New York, New Haven & Hartford Railroad, as a suitable territory upon which to base the study for a typical layout for workingmen's homes adjacent to the sites which have already been or might be set aside for factory sites along either side of the railroad in this section of the city. We have made a study of this district, and have evolved a plan



A scheme of development for an outlying district to give a system of streets on a uniform plan, taking advantage of the lay of the land, with plots of ground suitable for small houses and susceptible of picturesque and individual treatment.

very much along the lines of the report of December 17, 1909, before your Commission on "City Plan" concerning the "Allen Boulevard" and to which we call your attention.

In this plan, which is at the scale of 200 feet to the inch, we have proceeded carefully with due regard to the existing grades and evolved what we believe to be an effective and practical layout for the residence portion in this new section.

This residential portion of this section would occur south and east of Park River, and should be laid out in accordance with the varying level of the land, to give a picturesque and informal aspect, eminently fitting in character for such a development, and avoiding the incongruities that arise from a merciless gridiron system of streets.

Here, as well as everywhere else in the city, the principle of organization of traffic which calls for two kinds of streets necessary to municipal life should be recognized, namely: the through traffic-bearing thoroughfare, and the side street, connecting the individual residence with the main arteries. We have suggested on the plans that the land between the river and the railroad should be reserved for factory sites, with numerous sidings, possibly a local freight terminal. A strip of land on either side of the river is reserved for paths, parking, and playgrounds, and a roadway is planned outside of these strips of parking on both the east and west sides. In this way a broad parkway is obtained across the entire tract of land in question, furnishing a direct traffic-bearing thoroughfare to the center of the city, via Bartholomew Avenue, which joins the northeastern end of this Boulevard. Its southwestern end joins New Britain Avenue. Another through street — north and south —runs from Bartholomew Avenue across the tract into New Britain Avenue. A third street crosses from Zion Street, at its junction with Summit Street, to Grand Avenue where it crosses Park River. Across this tract, in the opposite direction, run Flatbush and Grand Avenues — from east to west — and a new diagonal avenue from the junction of Hillside and New Britain Avenues northwesterly and across Park River to New Park Avenue, furnishing direct cross-town communication.

We have suggested the diverting of Grand Avenue, as it nears the river, to follow a curved course, and thus to avoid the steep grade that occurs at this point. The new inner circular Boulevard, of which we have spoken in our Chapter on "Boulevards," also runs across this tract from the southeast to the northwest. Having thus established efficient thoroughfares, the subdivision into smaller blocks follows the contour of the land, so that the side streets may have moderate grades — where grades occur — and that the whole district with its numerous houses, may have a varied and picturesque general plan and avoid the dull monotony of repeated parallel streets. Occasional small parkings have been introduced. The whole district, indeed, should be planted with trees, that it may have the agreeable appearance that such a great portion of the city already enjoys. It will be seen that the blocks are planned to give shallower, but broader, plots than the usual plotting of lots 20 feet by 100 feet allows. In this manner a better distribution of land about the individual houses is obtained and the possibility of designing the houses in groups rather than in individual units is afforded.

The houses of the working people are of necessity so numerous and must be distributed in different parts of the city over such great areas, that they become one of the most important features of a municipality. They influence the general appearance of the city to a greater extent than the better class of residences, which are comparatively limited in number. We therefore suggest that every possible encouragement be given by the municipality, or by private organizations interesting themselves in municipal matters, or both, to the study and development of this important question of the housing of the working classes, either by securing suggestive designs, that will produce attractive buildings, at no greater cost than inferior ones, or by offering prizes for the best Workingmen's Houses. thus stimulating competition among householders and awakening pride of ownership; and by any other means that will educate the community and make it realize its responsibility as a whole, and also bring home to the individual his share in this responsibility.

OTHER IMPROVEMENTS.

I. Removal of Grade Crossings.— We understand that the city has already consulted with the railroad on the question of the elimination of all grade crossings within the city limits, and that work is actively progressing in some cases. It seems unnecessary, therefore, to call attention to the impropriety of maintaining grade crossings, excepting to urge that the work of removing these crossings should proceed in a comprehensive manner and with the least possible delay. Statistics have recorded at grade crossings in the United States — besides mere injury, a record of which is not given herewith — 938 deaths in one month.

II. Public Baths.— Public baths should be established in close proximity to the sections of the city which are most congested in population. These, when combined with open-air swimming pools, furnish attractive and healthy means of recreation, much needed by the poorer classes, and of evident sanitary and moral benefit. They are especially effective in the crowded districts which offer no outdoor recreation other than that afforded by the streets themselves. Such establishments may also be combined with public wash-houses, where women may bring soiled clothing and find all the conveniences of hot water, tubs, light, and good ventilation, thus avoiding the unhealthy conditions of laundry work in only too illy ventilated and unsanitary quarters. Personal cleanliness, when thus made easy and attractive, will work for the entire uplift of the community. Two sites suggest themselves. These two sites will serve the two districts of the city occupied by working people: (1st.) On the Connecticut River, within easy access of the large tenement district lying between Main Street and the Connecticut River. A bath-house in this section might be placed between the New Boulevard running parallel to the river and the river itself, or at the extreme southern end of Riverside Park. The latter site would have the advantage that it could form part of a general scheme of recreation grounds laid out in this park. (2d.) In Pope Park — a com-

bination bath- and wash-house here would serve the rapidly increasing workingmen's district growing up in this section.

III. Comfort Stations.— Our American cities have been particularly backward in providing for the public comfort and health in this particular. Numerous strangers enter and leave the city daily on business, many of them shoppers from the smaller towns. Necessity for providing for these visitors is evident. Frequent discussion on this question has taken place in Hartford, and we urge that this matter be actively taken up. It will be possible to incorporate such improvements, with separate entrances for men and women, directly from the street, in the new Railway Station, the old City Hall — if remodeled — and in the Municipal Building. Comfort stations should also be placed at convenient points in the parks near entrances or near the more frequented thoroughfares.

IV. Drinking Fountains.— Public comfort and health should also be provided for by numerous drinking fountains. We have mentioned in the case of electric light standards that it was quite as cheap to cast these standards from a well-designed pattern as from a poor one; this applies equally to a design for a drinking fountain. The city, therefore, should procure an effective one, and should establish numerous fountains throughout the city. These may thus serve the double purpose of comfort and ornamentation.

V. Waste Paper and Refuse Receptacles.— In the same category with the drinking fountains may be put the refuse receptacle. This may be made entirely unobjectionable in appearance, in fact, even ornamental. The utility of such receptacles is evident, when their establishment is coupled with a corrective ordinance.

VI. Street Names.— A uniform, consistent and clear designation of streets and house numbers becomes necessary in a city of the size of Hartford. Legible signs should be prepared and should be uniformly placed throughout the city at all street corners. They may be combined with the corner lighting

standards, as is shown in the photograph of lighting standards on Sixteenth Street in Washington, which we have shown in another part of this report. With the streets carefully designated, circulation about a city becomes immeasurably easier for the stranger, and in these days of long-distance motor travel, the necessity of such an improvement is most keenly felt.

VII. Street Trees.— There is hardly a single feature of city development that is more important, whether in appearance or in the comfort and pleasure that it affords the inhabitants of a city, than the proper planting and maintenance of street trees. We have already called attention to the function which these trees play in the city of Washington, and how much they add to the beauty of the city, to the shade and coolness of the streets, and to the pleasure of its inhabitants. The same is true of every city. Paris, Munich, Buffalo, Detroit, New Haven, Hartford or Boston without their trees would be dreary wastes such as many parts of New York and Philadelphia.

The city of Hartford is to be most heartily congratulated in that it has had the foresight to plant trees, and the good judgment to maintain them in such proper conditions. Washington Street, with its magnificent arching elms, is of a character and dignity that call forth the admiration of every one, be he a stranger or not, and no matter how often he may have to travel the length of this splendid thoroughfare.

While Hartford has done so remarkably well both in planting and in maintaining the trees, we would strongly recommend that it plan for a regular department — perhaps under the direction of the present efficient and public-spirited Superintendent of Parks — to develop, study, and plan for the future, as well as to maintain the present street planting. As the city grows and conditions alter, tree life becomes more complicated and difficult. To study the variety of trees that will do best under various conditions, to try to establish the best conditions for street planting, and to prevent, as in the city of New York, that vault permits and other encroachments should forever for-

bid the planting of trees — in other words, to evolve the entire problem on scientific lines in a progressive manner, requires special expert knowledge and a continuity of policy which can only be obtained by a special department properly organized to work at first, as suggested, as a subdivision of the Department of Parks, and gradually develop into an independent organization, as the needs may require.

This problem has been developed so fully in Europe that, in opening new streets, the laying of pipes for sewers, water, gas, and other public services, the arrangement of the sidewalks, and all the details of the street sub-surface, are planned in advance, to provide the opportunity for trees under favorable conditions, and in such a manner that, when a tree is planted, it need not be disturbed by street openings or necessary house connections. Proper drainage, the character of the soil, have all received attention, and then again nurseries have been established to grow the proper trees, to provide trees for replacement, of uniform growth, character, and size to match trees which are being removed, in order to maintain uniformity of the treatment generally in one stretch. Trees that are suffering are removed to nurseries, where they are given the chance to recover, and others of equal size are ready to take their places.

This study has proceeded so far, that they have even arrived at successfully developing trees of different heights, so that one tree may be planted on a lower level than the other, and the tops may be even and form a uniform avenue, as, for instance, along the quay of the Louvre bordering the Seine, where the sidewalk is too narrow for two rows of trees, one tree is planted on the edge of the curb — we will say about 30 feet high to the top — and the other tree is planted at the foot of the embankment, 10 feet lower, and is 40 feet high — the stem being 10 feet longer than in the case of the upper tree, thus bringing the tops to a common level.

This illustration is given to show what art can do in a reasonable manner to overcome the intricacies of tree planting where the effort is really sincere.

VIII. Front and Back Yards.— The city, naturally, cannot encroach too far on the rights of the property-owner. Much encouragement, however, can be given by the city to the improvement of the appearance of private grounds, especially in the districts in which particular attention needs to be given to front and back yards, such as the residence district of the working people, or by organizations interesting themselves in the city's welfare, in the same manner as we have suggested for the improvement of the design of workingmen's houses, that is, by offering prizes, and by awakening through the spirit of competition the pride of the individual owner. A movement of this kind has met with decided success in the city of Washington.

IX. Monuments and Statues.— On our general plan of the city, and on our plan of the center of the city at a larger scale, we have suggested sites for monuments and statues. These should always be placed with reference to the part they are to play in the general scheme of the city, if possible on the axis of vistas or other landscape features. Placed in this way, such monuments or statues will themselves have the most advantageous setting, and the city itself will avoid the disorderly and unstudied appearance that comes with the placing of sculpture at ineffective points.

Promotion of Public Improvements by the Remittance of Taxes.— We have several times in the report suggested the awarding of prizes as an encouragement to citizens for the proper development of the various improvements controlled by private interests, and also proper maintenance of private property, grounds, and gardens. The appropriation of money by the community for this purpose would probably not meet with great favor, and might be difficult of accomplishment, but we suggest that the prizes be in the nature of a remission of taxes, not to exceed a given sum in any one instance, and running for a limited period of years. The city might very properly in this way decide, for instance, to award annual prizes by the remission of the taxes in a sum not to exceed

$10,000.00 and then remit $1,000.00 of taxes on one class of buildings, $500.00 of taxes on another, and so on, for a period of one year or more, so that the city would know definitely how much it was spending for this purpose. The city would more than recover, in a very short time, the entire expenditure, by promoting by private enterprise, without expense to itself, many of the improvements which would otherwise have to follow later as a municipal undertaking; also by encouraging better and more permanent improvements, better and more orderly maintenance, and educating the whole community to a proper realization of the importance of this phase of municipal life. It would be just as legitimate an expense for educational purposes as any part of the school budget.

IN CONCLUSION.

We have endeavored to make our report complete and exhaustive without entering into unnecessary detail.

The whole study of city planning and city development seems to have swept over the world and to have spread throughout this country and it is a most vital problem, not only because, as we mentioned at the beginning of the report, our cities are unscientifically planned and are unscientifically administered, but also because of the tremendous expansion of our cities, owing to the spread of knowledge and civilization and the consequent desire of every citizen for the advantages and attractions of urban life, in preference to the hardships and loneliness of rural habitation.

If ideal conditions were established, the land would be plotted so that certain sections would be free from urban development and other sections would be reserved for cultivation, the proportion being so established that the cultivated sections would be of the proper capacity to serve the needs of the urban section. The result would be many small towns interrelated, and accessible to each other, with sufficient space reserved between these towns for necessary cultivation. This would control the development of the city, and would encourage the development of small interrelated cities at suitable distances,

and, by establishing such ideal conditions, would retard the abnormal growth of the more important cities, with the consequent complications which arise in every direction, and the concentration of population at the expense of the prosperity and happiness of the other parts of the country, which are thus depopulated. Such conditions can hardly be established in this country, excepting very gradually and extending through a very long period of time, and it behooves us, therefore, to consider the immediate betterment and development of our cities and to anticipate the growth which has only begun.

The suggestions contained in our report should be considered in this light. Some of the improvements and modifications must be undertaken without delay but most, if not all, must be foreseen and provided for, so that, however gradual this development may be, nothing will interfere with its orderly progress. The recommendations which we have made and the plans which we submit herewith, in our judgment embrace the developments which should be provided for in anticipating the normal growth of the city for fifty years to come. If the growth should be retarded, or should remain normal, these suggestions will probably go very far towards anticipating most of the problems which may arise. If the growth of Hartford should be abnormal, the period covered by these recommendations would be lessened; but the importance of anticipating these improvements would therefore be emphasized. We do not desire to be placed in the position of the early inhabitants of New York, who built the rear of the City Hall of brown stone, because the population would never extend that far; or even in the position of the Board of Aldermen, who laid out the map of the city of New York in 1808 embracing the streets as far north as 154th Street, and apologized for plotting the town so far beyond what would ever be its northerly limit. We, therefore, mention fifty years as a reasonable limit for which plans might be conceived, without attempting to prophesy as to the extent of growth in area or in population of the city of Hartford.

We urge very earnestly that a Bureau of Statistics be founded to collect and tabulate exact knowledge concerning all

matters affecting the government and the development of the city.

We further recommend that a Board of Experts should be established, and that all technical matters connected with the development of the city, or any municipal project or problem, should be referred to this board for study and for a report, before action is taken thereon by the city government in any of its branches, in order that complete, scientific, and accurate information shall be within the reach of every city official, and of every citizen of Hartford in advance of such action. This method seems to us all the more important in a city like Hartford, where such matters are dependent upon the vote of the people by referendum. The mere discussion of a contemplated improvement through the press or by citizens, without correct information, develops prejudice and encourages local feeling, as against the interest of the community at large, and is apt to narrow and distort the whole point of view, which would hardly be the case if the discussion were preceded by an authoritative statement of a Board of Experts based on statistics and correct scientific principles and knowledge. Such a board might at first be composed of your statistician, the city engineer, and a consulting architect, and could be enlarged as experience might dictate and circumstances might require.

We recommend that at the proper time such legislation as may be necessary to accomplish the various purposes recommended in this report, whether by statute, ordinance, or mere municipal regulations, should be carefully considered and adequately provided.

Lastly we strongly recommend that the same policy of planning the development of the city in advance of its requirements be pursued with regard to its finances. It is absolutely necessary that the same method should be adopted with regard to expenditures, as with regard to improvements, and that both should be planned for years in advance on parallel lines, so that it may be ascertained statistically what the city's resources will be, in order to distribute its expenditures over a term of years

and thus prevent a waste of its opportunities and the misapplication of its resources.

We desire to recognize the valuable assistance that we have received in the preparation of this report from Mr. Frederick L. Ford, City Engineer of the city of Hartford; and also to recognize the devotion and interest of Mr. E. V. Meeks, of our staff, in assisting us in the assembling of the data for the report and the preparation of the plans accompanying the same.

Respectfully submitted,

CARRÉRE & HASTINGS,
Advisory Architects.

February 15, 1911.

LIST OF DRAWINGS.

1. Diagrammatic Plan of a Modern City. Scale fifteen hundred feet to the inch.
2. General Plan of Hartford, rendered. Scale one thousand feet to the inch.
3. General Plan of Hartford, showing relation of proposed work to existing city. Scale one thousand feet to the inch.
4. Plan of Centre of City, rendered. Scale one hundred feet to the inch.
5. Plan of Centre of City, showing relation of proposed work to existing conditions. Scale one hundred feet to the inch.
6. Typical layout of new district, rendered. Scale two hundred feet to the inch.

PHOTOGRAPHS.

The photographs appended to this report are not given as suggested treatments but as types of possible development.

EXTRACT FROM MR. S. D. ADSHEAD'S "EDITORIAL FOREWORD and AN INTRODUCTION TO THE STUDY OF CIVIC DESIGN," PUBLISHED IN THE TOWN PLANNING REVIEW, THE JOURNAL OF THE DEPARTMENT OF CIVIC DESIGN, AT THE SCHOOL OF ARCHITECTURE OF THE UNIVERSITY OF LIVERPOOL.

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In the contemplation of a city, we have before us the most comprehensive of the works of man; its solid walls tell us of his stubborn will, its fine façades of his success, its twisted streets of his uncertainty of aim, the squalor of its slums of his defeat. It is in human life that we have the secret of its growth, and man himself is but the reflection of its breadth.

Planned to a preconceived system, we have cities the expression of a strong administration; built up unit by unit, we have in them the presentment of individualism. Here, then, are two methods of city building, or rather a method and a haphazard system. Cities have been planned and built for the people, and cities have grown and been built by the people. Either like Paris and Washington, and the colonial cities of ancient Rome, they have been laid out on regular and orderly lines, or like Rome itself and most mediæval cities, they have grown fitfully and at odd times.

By many it is claimed that in this latter growth, in the growth that is unfettered and unrestrained, may alone be found the city of true expression; the city moulded of the people who in it dwell. If in the city we look only for the expression of the individual, disregarding altogether the efforts of the citizens

as a class, then, indeed, there is justification in the claim for this so-called natural growth.

But in the well-organized city individual expression is subordinate to the civic expression of the city as a whole. Furthermore, just as the city is the expression of the people by whom it is built, so the people are the reflection of the city in whose environment they have lived, and therefore I submit that so great a responsibility as that of city building ought not to be left entirely to individual control. And is it not the appreciation of this, with the vista of possibilities and responsibilities that are therein held, which vitalizes the preconceived plan, and wherein lies the very raison d'être of Civic Design?

THE PREARRANGED PLAN.

No city of importance has ever been deliberately laid out on any but orderly lines. Edward I. laid out regular towns in France, and in England he founded Winchelsea, a town with a regular plan so far as the possibilities of the site would allow.

Athens, in its prime, a city of some 120,000 inhabitants, possessing architects the most cultured and capable that the world has yet seen, should pre-eminently have been a city of orderly design, yet Athens, so fortunately circumstanced, was, apart from the incidental arrangement of her public buildings, entirely without design. An ancient city, she had grown up fitfully and without preconceived plan. But it was not so at the Piraeus, the harbour town, close at hand. Hippodamus was the architect of this town, and we are told that whilst in Athens the streets were narrow and crooked, and many of them little better than passages, in the Piraeus they were broad and rectangular on plan.

The conditions which prevailed at Athens refer with equal aptitude to the great city of Rome itself.

Exacting as Roman taste was in its demand for symmetry and regularity, Rome, in the connecting together of her units, was at every period in her history one of the most picturesque cities in the world. The great vistral effects of Haussmann in

Paris, and of L'Enfant in Washington, were quite unknown here; but it must not be understood that they were not desired.

The wealth of gorgeous and gigantic effect which Rome in her magnificence possessed, and which she had accumulated in the course of time, was the work of successive emperors; and whilst each undertaking was in itself a fresh challenge to the superb splendour which luxury set out in stately and symmetrical order could display, at the same time in the connecting together of her parts, the effect, as already stated, was rarely other than that we call picturesque.

In support of this statement, I cannot do better than quote the words of Dr. Lanciani, the eminent authority on the archæology of ancient Rome. Speaking of the different works of the emperors, he says: "Nero, the successor of Claudius, conceived the gigantic plan of renewing and rebuilding from the very foundation not only the imperial residence, but the whole metropolis; and as the metropolis was crowded at every corner with shrines and altars and small temples, which religious superstition made absolutely inviolable, and as the slightest work of improvement was fiercely opposed by private owners of property, and gave occasion to an endless amount of lawsuits, appraisals, and fights amongst the experts, he rid himself of all these difficulties in the simplest and cleverest way."

"He ordered his favourite architects, Severus and Celer, to draw a new plan of the city, and to draw it according to the best principles of hygiene and comfort." The account goes on to describe his elaborate preparations for allaying the wrath and concern of the inhabitants at the appearance of the conflagration which he had so cleverly conceived, and for whose preparation he had arranged temporary booths and provided food; and it continues: "Even in our age of progress we cannot help admiring the profound wisdom shown by the two imperial architects, Severus and Celer, in designing and rebuilding the city. The straight line and right angle were followed, as far as could be done in a hilly region, in tracing the new streets and avenues through the still smoking ruins. Hasty and irregular constructions were forbidden, the line of frontage

of each new building had to be sanctioned and approved by one of the official surveyors. Large squares were opened in place of filthy, thickly-inhabited quarters. The height of private houses was not allowed to exceed double the width of the street, and porticoes were to be built in front of each one to provide the citizens with cool, sheltered walks in case of rain or of excessive heat. Lastly, wooden ceilings were excluded from the lower storeys of private dwellings, and absolute isolation on every side made compulsory."

But I have quoted enough to show that the ancients appreciated the advantages of having, wherever possible, an organized city plan. The occasions, however, where opportunity was afforded for its realization, were few and far between, and where they have occurred have generally been obliterated at later times; so that the city planner of today, in so far as the laying out of the city "in toto" is concerned, has little to learn from an ancient source; yet not so in part.

Rome, in the laying out of her forums, her palaces, her pleasure places, and her public ways, was unity itself; and the adjustment of her symmetrical units, unsymmetrically arranged, offers solutions of problems so varied and of so great interest as to remain to this day a precedent for axial connection unrivalled in the world.

HISTORICAL RETROSPECT.

Many causes have been accountable for the foundation and early growth of towns; often the meeting of two cross roads, a convenient watering place, a site of natural advantage as a place admirably suited for defense, a prospective port, a monastic institution, or the proximity of a mine. To all such incidents cities may attribute their location and the reason for their birth.

But, as already hinted, in analyzing a city plan, and in speculating on its growth, the chief interest attaches not so much to the exigencies of its site, as to the administrative conditions which prevailed amongst its inhabitants at the time of its foundation and during the earliest stages of its career.

It is not the oldest cities nor those that have risen to greatest fame which have been laid out on the best lines. Rome, in planning her colonial cities, set them out in a straightforward and rectangular way, and Athens did the same; but whilst this was so, and whilst Palmyra, Timgad, Miletus, the Piraeus, Priene, and Selinus each possess square and regular lines, Rome and Athens themselves, cities of prehistoric birth and irregular growth, are, as already stated, in their setting out but clever adjustments of disconnected parts.

We are told that Hippodamus town-planned the Piraeus, Miletus, and Rhodes in the Periclean age, and established a tradition in town-planning on square lines.

Some of the stateliest cities of antiquity were those laid out in this way by Alexander or his successors—Alexander, Priene, and Antioch. Later towns in the provinces of the Roman Empire were similarly laid out, as we may infer from the remains of such examples as Treves, Timgad, and Silchester.

The mediæval age, with its feudalism and hereditary craftsmanship, gave us cities striking in the interest of their individual conception, and by reason of their narrow environment harmonious in the style of their general expression, but usually lacking in systematic arrangement, the essential of a later classicism.

It is in the period of the Renaissance, during the sixteenth and seventeenth centuries, that we get the first example of a modern city of true classic plan. At first the mere rectification of a street, or the opening out of a square, but later the reconstruction of whole districts at a time, or the laying out of new districts on symmetrical lines.

Louis XIV. of France was the first monarch to appreciate and put in practice the axial plan, and many of the great vista effects in Paris were designed at this period, although not actually carried out then. True, Vinole, Serlio, and Cellini, Italian architects of the Palladan period, had been employed by Francis the First in work at the Louvre. Still, it is to the genius of Louis XIV., assisted by his architects Bullet and Blondel and by his landscape architect Andre le Notre, that we

are indebted for the great Champs Elysées and the Place de l'Etoile, and they it is who first originated the tree-lined boulevard, with its clearly-defined roadway, its trottoirs, and its promenades.

However fully appreciated as was the axial plan and its possibilities for bringing into relation the sinuous ramifications which are the characteristic features of most mediæval towns, still royal administration was not directed to great civic improvements at this time.

Italian art was in decay, French renaissance was in its youth, and the remnant of the Italian artists were attracted to France; and there, attaching themselves to a susceptibly artistic court, they lent encouragement to those dreams of artistic intoxication which in their realization have rarely, if ever, been surpassed.

Though primarily concerned in the creation of palaces and pleasure grounds for the amusement and diversion of the aristocracy and the king, the architects of this period have at the same time left considerable traces of their influence on the town. In Paris the greater part of the Place de la Concord, and those axial vistas which resulted in the Luxembourg, the Invalides, and the l'Ecole Militaire may be mentioned as examples of what was then done. Important as was this work, what was actually executed at this period was very little in comparison with that which was suggested should be done, and although it is to the later empire period and the administration which it established that we are really indebted for the actual carrying out of the great Paris plan, at the same time it is to Louis XIV. and his architects that Paris is most indebted for the ideas which were embodied therein.

The transformation of Paris by Haussmann, architect to Napoleon III., we may regard as the most comprehensive piece of city reconstruction and remodelling that the world has yet seen. L'Alphand was the landscape architect who assisted Haussmann in his great work; he laid out the parks and advised as to the planting of trees. Haussmann was far-seeing, he understood human nature, and the people for whose welfare he car-

ried out this great scheme. He had great difficulties, vested interests to contend with, and an expenditure which usually exceeded his estimate by 50 per cent., but he had ideas and felt the importance of his work. He understood the genius of Paris, its ambitions and its dreams, and he directed his energies to making Paris not only the most beautiful, but the most highly organized and the most up-to-date city in the whole world, knowing that to the Parisian this meant power and wealth. And when we come to consider that in Paris there is annually spent by sightseers alone a sum equal to the total cost of all this work, it is clear that his far-seeing policy was not in vain.

Contemporary with the town-planning movement in France under Louis XIV., we have in England a considerable amount of garden design and street rectification done by Wren, whose keen appreciation for everything Parisian is well known. Previously we have the formal planning of Inigo Jones, whose piazza of Convent Garden and Lincoln's Inn Fields may be regarded as the first examples in England of civic design. During the latter half of the seventeenth and the commencement of the eighteenth century very little progress was made in England in the consistent development of the town, and it was not until a later period toward the middle of the eighteenth century, that operations of any magnitude were carried out.

London was too congested, land was too valuable, and, still more important, administrative organization was too divided for the realization, as at Paris, of a great unified plan. Wren's great scheme had been discarded, and London, so far as the transformation of its central area was concerned, had lost its chance; but there were still outlying extensions to be made. Between 1730, when Cavendish Square was laid out, and 1780, when Portland Place was completed, the whole of a huge system of rectangular streets and spacious squares was spread out over the area lying between Oxford Street and Marylebone.

Controlled by ducal influence or by the crown, a consistency was throughout maintained; and it is to the tasteful direction of the Commissioners of His Majesty's Woods and Forests,

in whose employment were Robert Adams, Burton, and Nash, that we are indebted for Regent's Park, Portland Place, Regent Street, Carlton Palace, and much of the Strand.

In Liverpool at the close of the eighteenth century similar work was being done, resulting in Falkner and Abercromby Squares. But the interest of the movement lies not only in the administration which brought it about, but also in the education of the architects responsible for its effect.

Cotemporary with the rush of Italian artists to France, in the middle of the eighteenth century, English architects were attracted to France and Rome. Conspicuous amongst these is Robert Adam, an indefatigable worker and skilful organizer; he it is who influenced most of the town planning carried out in England and Scotland at that time, and undoubtedly the Woods, of Bath, both father and son, owe much of their success to the knowledge acquired in association with the school which the brothers Adam inspired.

In Edinburgh, where the influence of Adam was more evident than elsewhere, we have in new Edinburgh a most important work; the most orderly and the most comprehensive piece of town planning of which Great Britain is possessed. A competition for the laying out of new Edinburgh was promoted about the year 1760. James Craig, a cotemporary of Adam, and nephew of the poet Thomson, was the author of the chosen design. After considerable delay it was approved by King George III., and adopted by the town council about the year 1767. As a clever adjustment of composition to the varying contours of an irregular site, Craig's plan is exceedingly happy in its result; indeed, it is remarkable to find so extensive and important an area laid out with such evident submission to the dictates of a great architectural scheme. There is no doubt that French influence was directly concerned in the way in which this came about. The rebellion of 1745 had just been suppressed, the most enterprising of the Jacobite party and of the Edinburgh aristocracy had for a time been banished to France. There, in intimate association with the works on which the Louis were engaged, they acquired a desire to par-

ticipate in this new classic phase. Adam was no doubt influenced, too, and must have discussed these new problems with his banished countrymen when on his continental tour, which he undertook about that time. We may infer from this much that it would be difficult otherwise to understand, but it is remarkable that in new Edinburgh we have a town laid out more like Paris than elsewhere in this country is to be found.

Towards the end of the eighteenth century, and during the commencement of the nineteenth, the classic revival had strenuously set in, and encouraged by the success of Bath, Ramsgate, Margate, Hastings, and Hove, each developed their towns and laid out their fronts.

All this work, carried out by builders for the big landed proprietors, and immediately controlled by the most scholarly and cultured architects of the period, will long remain as our chief source of inspiration in this country for civic composition and design.

But control and culture were not to last, aristocratic influence was on the wane. The passing of the Reform Bill, the extension of the franchise, and cotemporary influences, shifted the responsibility of city extension once more to the democracy, and successful middle class. They, practically uneducated, unorganized, and lacking the instinctive appreciation which was the hereditary gift of their forbears, the bourgeois class of the mediæval period, extended their cities, erected their monuments, and laid out their streets in a yard-measure sort of way without regard to association, æsthetic relation, or any other sort of cohesion; and, moreover, being involved in the disturbing influence of a great Gothic revival, and also in the solution of difficult practical problems which the introduction of new materials and methods had by the discoveries of science brought to light, their efforts in civic extension resulted in considerable confusion. It is interesting to note that early in this period the elected Council of Edinburgh actually presented a Bill in Parliament to allow them to acquire and build over the open space on the south side of Princes Street, public grounds which are today the pride of Scotland, and which make Princes Street

one of the most successful and beautiful streets in Great Britain. The Bill, which passed through the House of Commons, was, fortunately for Edinburgh, thrown out by the House of Lords. We must bear in mind that this was many years ago, and not today.

The lack of artistic appreciation which characterized the period is only too well known. The realization of classicism had retrograded into a study of the classics. Art, from being a matter of creation, had collapsed into careful copyism, and architecture with civic design had simply deteriorated into senseless building.

This slight historical survey brings us to the commencement of the present century and to a new era in the history of civic design. Democracy, with its new responsibilities, has grappled with the problems of its youth; it has made mistakes, it has to answer for far-reaching and most disastrous results, but it has passed through the fire. At first, intoxicated with the freedom that it had won, it sought but mercenary gain. Cities became factories, and life merely a business concern. Sham respectability became a cloak for truth of expression, and what interest existed in civic design was centred around questions of construction and the importance of hygiene.

But there has been a change, knowledge has spread, democracy has grown, the modern city awakes to a new dawn, and today it is the democracy who watch with anxiety the growth of towns, and vandalisms such as are being perpetrated on ducal estates like that which covers Bloomsbury and Russell Square.

During the present generation, and indeed, almost during the present century, most of the cities of Germany have either undergone entire reconstruction or have been so extended as practically to have become new towns, in each case in accordance with a well-thought-out plan; and not only has attention been directed to the housing of the people and the elementary requirements of commerce, but later types of buildings, as abbatoirs, stores, railway stations, and educative and social institutions of every grade have advanced considerably in their

internal organization, and the various units of a city have been considered in reference to one another in a way previously unknown.

Houses, shops, parks, playing fields, and public buildings have each their appropriate place.

In America similar work is in hand. The monotony of America's chequered plan has resulted in a national enthusiasm for town planning and civic design. Every city in America has in hand a scheme for reconstruction. In particular, Washington, Chicago, and St. Louis have each prepared and are putting into execution a magnificent plan. Approaching their civic centres around which are to be ranged their judicial and official groups, are avenues, tree-lined and flanked with public and other important buildings on well-arranged sites.

Their railway approaches and water fronts are on a scale of breadth and magnificence previously unknown, and each is surrounded with inner rings of parks and places of recreation, and outer rings of public preserves designed to provide unlimited fields for recreation for very many years to come.

SOCIOLOGICAL ASPECT.

A well-planned city is the outcome of a well-organized system of city life, and so dependent is the one upon the other that it would be fitting before proceeding further to sketch out the sociological conditions of a communal existence, and so make the connection the more clear. In no other way can the fundamental requirements of a city plan be properly understood.

Let us, then, turn from the city itself, with its hive of industries, its labyrinth of cubicles, and its pulsating arteries, to the citizen, whose physical necessities, administrative abilities, and intellectual activities alone can account for its growth. It is in its system of administration that our interest is mostly concerned. Whether autocratic and inflexible, or democratic and erratic, city administration has ever exerted a direct influence on city growth.

First, then, we have the primary essentials of existence — "food," "home," and "rest"; these associated with a com-

munal existence become conditions of commercial undertaking, habitation, and recreation. In the well-organized city the proper provision for these physical necessities is a matter of first consideration. To satisfy the demand for a home, we get different types of dwellings — the private residence, the tenement dwelling, the apartment house, and the hotel; work demands docks, goods stations, warehouses, factories, offices, banks, markets, and shops; and recreation calls for parks, playing fields, sports grounds, gymnasia, baths, waterways for aquatic displays, rinks, race courses, theatres, music-halls, kursaals, and social clubs. Each type increasing in complexity, elaboration, and luxury with the culture and importance of the town.

Ultimately, with proper distribution and communication our city simplifies itself into residential districts, business districts, and commercial zones, park systems, and pleasure places. These are the essentials of communal existence, and it is on the proper provision of these that the physical health and prosperities of a city entirely depend; unless these are amply provided for and well disposed, the moral force and intellectual vigor of the citizen will undoubtedly suffer.

To organize all this and to keep it in healthy relation, moral force must be called into play. Here we get law, order, and custom. Law, the primitive and essential idea of dispensation, gives us in its spiritual aspect the church, and in its temporal aspect the government house, the mayoral parlor, or the seat of law. The higher state, order, calls for organization, and to satisfy its requirements there are needed the executive offices. To assist in the administration of order we need administrative agencies; these conduce to custom and automatic regulation in the conduct of the affairs of the city; and here are called into service all undertakings, commercial or otherwise, in so far as they provide for the better realization of communal organization and which assist in establishing that relationship between the various members of the community which we may rightly term citizenship. Amongst buildings called into requisition by such undertakings may be mentioned railway and tramway stations, police stations, fire stations, power stations, gas and water works,

and other municipal undertakings; also elementary schools in so far as their training is directed to the making of good citizens rather than scholars.

Whereas the executive buildings should be grouped, these administrative buildings should be distributed over the whole city.

We have now the necessary conditions of city life and administrative organization for its control, and we have shown how the various units of the city should be disposed to satisfy these conditions; it only remains to make provision for the acquisition, cultivation, and appropriation of those intellectual activities which are responsible for its intellectual growth. Subdividing these we get states of perception, contemplation, and imagination. Perception is concerned with the ascertaining of information, for the housing of which are required such buildings as museums, physiological, archæological, natural history, geological, and botanical; and it may be mentioned in passing that a sharp line should be drawn between museums and art collections. The higher state than perception, contemplation, concerns itself with comparing; here are required competitive exhibitions, and all such buildings as are necessary for comparative consideration and for the testing of results; and amongst these I would suggest a new building: a permanent exhibition which might be of the utmost use, if not in every town, at least in every capital city; not such as exists to collect exorbitant commissions from sundry exhibitors who can be induced to exhibit and to pay, but an exhibition where exhibitors, after proving to a competent committee the necessity for, and utility of their exhibit, could permanently place it for public comparison with others of a similar kind. How many thousands of worthless patents and how much utterly worthless rubbish, most extravagantly advertised, would thus be condemned.

The higher state, imagination, demands art galleries, concert halls, opera houses, theatres, and all such buildings as are used for creative expression.

These should as far as possible be arranged in groups.

The three aspects of city life — the physical, the moral, and the intellectual — will, in order to ensure their maintenance and growth, need, to be supplemented by a well-organized system of education, directed to equipping the youth of the city with the special knowledge required in occupying positions incidental to the regular demands of city life; hence are required primary and secondary schools. The higher educative establishments, the colleges and universities, go further; they supply that knowledge upon which the city depends for its culture and which is essential to its larger growth.

These buildings, classified as they may be in accordance with the exigencies of the educative administration which obtains, should for convenience be placed near the intellectual group, and in easy access to the home.

Such a sociological survey as this, pointing out, as it does, the connection that exists between the various conditions of communal existence, suggests that a similar connection should exist between buildings provided for the same use; and it is interesting to note that in the town plans of highly-organized and progressive cities like Washington, Dusseldorf, and Vienna, an architectural grouping of buildings with reference to their relative use is very conspicuous. The idea of a park system, with its connective means of recreation, is an invention of today, as also is the civic centre and the commercial zone; why not proceed further and consider other groups?

It must now be obvious that there can be no satisfactory city plan which does not emanate from a well-organized system of city life, and to devote attention to the former without reference to the latter can only tend to an artificial result.

The building of an entirely new city arranged in accordance with an organized system of city life, such as that which has been briefly outlined, is a matter of rare occasion, even in these days of rapid colonization. And it would seem wasted time and mere dreaming to regard the problem from this impracticable point of view. But this is not quite so. Most of our larger cities, which have grown by leaps and bounds during the period of industrial prosperity that prevailed during the

latter half of last century, require pulling down, Haussmannizing, and re-erecting on intelligent lines. This, then, is the work which the municipal authorities and the town planners of the future will be called upon to undertake, and it is in the carrying out of such undertakings that an appreciation of what ought to be will be found necessary before dealing with what is.

THE INFLUENCE OF THE CITY ON CITY LIFE.

Having shown how dependent is the development of the city upon city life, and having mapped out the modern city in its highest state of organization, it would be fitting before concluding to make a few observations which will show to how great an extent is the welfare of the citizen himself dependent upon the city in which he dwells. Unquestionably direct planning, convenient grouping, and excellence of effect will reflect back upon the individual citizen and influence his physical, moral, and intellectual growth.

That the planning of the city will influence physical growth is too well known to need comment here. That it can have a moral influence (using the word moral in its strictest sense, as meaning regulation of conduct) is an idea which has had less consideration; but it is very obvious that in the planning of streets and in the grouping of buildings, where these are regular, ample in width, and suited in every way to the purpose for which they are designed, there is not only a saving in actual time in moving from place to place, but also a freedom from that mental worry and anxiety which accompanies all movement amidst irregularity and complication. Consider for a moment the nerve strain, the loss of time, and the exhaustion which accompanies the process of entraining at a station like Waterloo, London; more especially to one unacquainted with its approach and unaccustomed to entrain here. The same observations apply with equal force to other excursions in a city that is without design. The economic advantages in favor of directness and spaciousness in the city plan cannot be over-estimated.

But proceeding to its intellectual influence, this we may aptly dwell upon at greater length. It is expressed in its char-

acter and its style, and it is here that the modern city when compared with cities of the past is at so deplorable discount. We of this generation are too apt to associate civic existence with gaunt and ugly buildings, flaring advertisements, entanglements of electrified wires, collections of chimney pots, crowded slums, jostling and noisy traffic, squalor and dirt. Let us think of a city rather as a chosen place wherein to dwell, as a rendezvous of daily entertainment, as a vast expression of the sympathies of the human race, as the greatest and noblest of works of art; elevating to the imagination and inspiring to the enthusiasm. All this and more is what a city ought to be.

The city is, in the first place, the envelope of its inhabitants; its buildings are their constant horizon and its streets have their daily regard. As such it should exist primarily for their edification, their pleasure, and their well-being. To talk of a city as existing solely for purposes of trade is to talk of mankind as existing for meat alone. In the city of the future, mining, manufacturing, and other necessary but mechanical occupations which are, under existing conditions, smoke producing, accompanied by excessive noise or in which are emitted pungent smells, need not be identified with city life. Improvements in methods of manufacture or in communication will remedy this.

The possibilities of a city as a place of human habitation are quite beyond our conception, living as many of us do amidst the smoke and depressing influences of suburbs extending almost on all sides in dingy monotony.

How distressing all this appears when we come to consider how ennobling are the aspirations which a city can excite. Oscar Wilde tells us that art holds the mirror to nature. I might follow up this epigram and say that the city is the model to which the country needs conform. A city is the greatest of works of art, written on its walls are the traditions and history of the past, outlined in its composition is the imprint of the human soul. The city is a great stage, and city building a real theatrical art. Mellowed in harmonious color and reflecting the soft blue of the sky, the effect of its sunlit walls is such as the

most brilliant stage display can but poorly suggest. And yet it is but the background of the citizen who traverses its ways. Great is the city whose architecture is passed unnoticed by the crowd, but not unfelt. Great is its presentment when its more important buildings alone demand conscious attention, leaving the rest but subconsciously felt. Convincing is its merit when the persistent formality of its street is conducive to a sense of respect, and arouses in the heart of the citizen that pride of citizenship alone engendered by civic art.

The problem today is to express in our civic architecture that character which we associate with all that is best in our highly-organized city life, that city life which pulsates with intense energy, vivacity, polished refinement, and an intelligent perception of all that has come to stay.

In its essential requirements it calls not only for more highly-organized buildings, but for entirely new types. We have wonderful machinery for construction, erection, and rapid completion. We have skilled mechanics standing each by his perfected tools. We have splendid trains, smooth-running trams, and rapid cars. We have city life with a modern character entirely its own. The city itself must express all this. Relegated to the good old days is the city which slumbers 'neath its cozy old roofs, whose windows all mullioned delighted in tiny panes, and whose walls were supported on rough-hewn beams. Such cities were full of charm, but they have passed away; their day has gone never to return.

True, our outlying suburbs, our country villages, our places of relaxation and retreat, may still partake of the character of these old-world towns; but in the city proper, where throbs the pulse of modern life, new conditions must prevail. Here, where complexity of existence is intensified by the rapid movement of modern life, greatness of conception must have stringent control. We must have a character about the buildings of our streets which suggests strength held in reserve, and abundance of force most subtly controlled.

Relaxation and riot-running must happen but on rare occasion. On what, then, must we base our character and our

style? Mediæval art is too free. True to itself, its leaning towards individual expression in an age permeated with an unhealthy craze for self-advertisement would result in a too pyrotechnic display. What we need is the controlling influence of the Greek; not the architecture of Pennythorne and of Smirke, whose pedantic efforts were confined to the mere reproduction of the Parthenon, the Lysicrates' monument, and the Erechtheum, but the Greek work, or rather the work based on the Greek of earlier men, who, studying the problems of the hour, had placed these first, and then ransacking Greece and Rome, found there the garments with which they could be suitably clothed. Such men were Adam, Chambers, Saone, Cockerel, and Elmes.

From these we must take our cue, and with our new conditions like them return once more to the Greek and to every style which Greek art has directly inspired.

A great city has continuity in its character, and a oneness in its many phases of expression. It is here that it exemplifies the strength of its organization. It is in its tone and colour that this is most clearly shown. The city which is white has the greatest refinement and charm. Paris, of modern cities the most beautiful in the world, is a city of ivory studded with pearly grey in a setting of green.

Regent Street, London, is painted in white and cream, and to this is entirely due its attractiveness to the fashionable throng.

The city which is white, and which scintillates and reflects the light of the sun, is the only fit background for the brilliant crowd with which every progressive city from Athens to New York has stood possessed.

Cities which are grey, like Edinburgh, suggest rather endurance, grandeur, and romance.

Grey cities are very fitting these humid and northern climes.

All great cities are either white or grey. That which is a golden red harmonizing with the rich green verdure of the surrounding land, will ever suggest ease of existence, simplicity, and primitive life. Such a harmony can never suggest solidity of existence as does grey, nor vivacity as does white or cream.

We who are compelled to live in smoky towns of dull brick and blackened stone can but ill picture the cities of the east. The brilliancy of the cities of China, Hindostan, Egypt, North Africa, Asia Minor, and Greece, seen in the zenith of their existence, with their gorgeous pennants, stencilled cornices, gilded domes, and ivory façades, decorated in peacock hues, is quite beyond any conception of ours. Venice is their nearest approach.

Such colouring has no place in these modern climes, but our colder and more humid cities, were it not for our smoke, could have a harmony entirely their own.

The character of a city is most evident when seen through the medium of its colour, but it is also seen through its texture and its form.

The buildings and the outline of the streets, to be a fit complement to modern city life should be regarded in the first place as a background and as a foil. In their form and outline they should be simple and strongly composed. Their surface should be hard and their enrichments delicate to a degree. Such is the street architecture of Paris.

The characteristics of a city expressed in its color, its texture, and its form, reflect on the citizen himself. Its design, the grouping of its buildings, and its outward expression are matters of vital importance to his well-being; and that these should have been left to blind chance to develop in the past shows a lack of appreciation amongst those responsible for city building difficult to comprehend.

(Signed) S. D. Adshead.

THE FOLLOWING VERY COMPREHENSIVE AND FULL PROGRAM WAS PREPARED BY THE HARTFORD CITY PLAN COMMISSION AND SUBMITTED TO US FOR OUR CONSIDERATION IN PREPARING THE REPORT ON THE CITY PLAN AND IS PRINTED HEREWITH, AND OUR SUGGESTIONS OR RECOMMENDATIONS CONCERNING EACH ITEM ARE CONTAINED IN THE BODY OF THE REPORT.

1. The treatment of the grounds surrounding City Hall to give a proper base or setting for the old Bullfinch building.

2. The selection of a suitable site for a new municipal office or city hall building.

3. The selection of the best site for a technical high school building.

4. The preparation of a special plan for better illumination of the streets in the business section, beginning with City Hall Square; Main Street from Needham's Corner to Park River; Asylum Street and State Street from Union Station to Connecticut Boulevard; Pearl Street, Ford Street, and Morgan Street and gradually extending to other streets; and using durable and ornamental lighting standards.

5. The widening of Jewell Street and Wells Street to form a better connection between Union Station and the southerly part of the city, as well as to relieve Pearl and Asylum Streets from increasing traffic congestion.

6. The preparation of a general plan for future development of the Arsenal and Armory and State Library grounds, to harmonize with Bushnell Park; the location of new bridges over Park River within the limits of these grounds, and plans for rebuilding the bridges opposite Union Station and at the foot of Trumbull Street.

7. Opening a new easy grade highway across Bushnell Park and the Arsenal and Armory grounds from Union Station to the corner of Broad Street and Capitol Avenue, to avoid the heavy grades on Trinity Street and Asylum Hill in traveling to and from the shop district.

8. The extension of Bushnell Park to Main Street.

9. The extension of Bushnell Park to Connecticut River.

10. The control of the banks of Park River from the Connecticut River to the city line, to prevent the establishment of objectionable industries and the pollution of Park River by the establishment of river reservations. This can now be done especially along the north and south branches of Park River at much less expense than at some future date.

11. The regulation of the flow of Park River between the Connecticut River and Broad Street, so as to remove much of the present unsightliness.

12. The control of some of the smaller streams like Gully Brook, Cemetery Brook, Folly Brook, etc., within the city limits to prevent the dumping of ashes and rubbish along their banks, which later wash down into the sewer system of the city, and have to be removed at great expense. Also the advisability of gradually enclosing these streams and appropriating them as a part of the sewerage system of the city. Their use as surface water carriers is indispensable, but should they be left open and kept attractive and clean, or be enclosed and become mere sewers?

13. The widening of High Street and the construction of a trolley line therein to furnish a better connection between the northerly and northwesterly sections of the city with the Depot, High School, State Capitol, and manufacturing district. The construction of this trolley line would relieve Main Street, Asylum Street, and Pearl Street, in the vicinity of City Hall Square, of much transfer congestion, and would also be a great saving in time for trolley patrons using the new line.

14. The extension of Walnut Street to connect with the westerly end of Chapel Street, and the opening of a new street from the easterly end of Chapel Street at Trumbull Street

easterly to Main Street opposite Talcott Street, thus providing with Homestead Avenue a new outlet from Main Street to the city line at Bloomfield.

15. The widening of Morgan Street from the new freight yards of the New York, New Haven & Hartford Railroad Company to Main Street, and possibly its extension westerly or southwesterly toward Union Station.

16. An extension of Broad Street from Farmington Avenue, northerly across Asylum Street, the grounds of the Deaf and Dumb Asylum, swinging westerly around the Garden Street Reservoir and connecting with Garden Street at Collins Street. Broad Street and Garden Street would then form a continuous highway from Goodwin Park on the south to Keney Park on the north, and would be the best location for the first crosstown trolley, as it would intersect all trolley lines from the west and bring the pupils from all of these lines direct to the High School, and thus relieve much congestion at City Hall Square. It would also furnish a better connection with the manufacturing district.

17. Plan for changes in railroad grades at Union Station so that Asylum Street and Church Street can pass over instead of under tracks.

18. Plan for relieving congestion under Asylum Street railroad bridge if railroad tracks remain at present grade.

19. Best location for new railroad station.

20. Plan of carrying all railroad tracks under Asylum Hill.

21. Plan of constructing tunnel under Asylum Hill for freight trains only and of letting passenger trains remain substantially at present location where splendid view of Bushnell Park can be obtained.

22. Plan of raising railroad tracks from Broad Street southerly for the abolition of all grade crossings. This plan would give greater headroom at the Park Street crossing and would permit an extension of Capitol Avenue under the new track grade to connect with the Boulevard and Capitol Avenue west of Park River.

23. Plan for the elimination of all grade crossings north of the Tunnel.

24. Plan for extending Niles Street from Woodland Street westerly across Park River to connect with Fern Street at Girard Avenue, thus forming a continuous easterly and westerly thoroughfare from Sigourney Street to Main Street in West Hartford.

25. Plan for a new thoroughfare for the relief of Farmington Avenue by connecting Hurlburt Street, Hopkins Street, Queen Street, Hawthorn Street, and Warrenton Avenue, thus forming a continuous highway from Union Station to Vanderbilt Hill in West Hartford.

26. Plan for widening Farmington Avenue from the junction of Asylum Street to Prospect Avenue. This street could gradually be transformed and made into one of the finest avenues of America. If widened it should be made from 100 to 125 feet in width from Asylum Street to West Hartford and continued at perhaps a lesser width through to Farmington. It could now be widened between Woodland Street and Prospect Avenue, where there are few trees to interfere and before the roadway is reconstructed. In the older section between Woodland Street and Asylum Street the lines could now be established and new trees planted on the new lines, then it could be gradually widened, perhaps a block at a time, as the older trees die off and the pavement needs renewing. It would probably take twenty or twenty-five years to accomplish this result, but it could be done, and the congestion on the street is increasing daily and some relief must be planned before many years. If Asylum Street was carried over the railroad tracks, the avenue from the High School down to Ford Street should be 150 feet in width and thus form a grand outlet to the rapidly growing westerly section of the city.

27. Plan for widening Asylum Street from Farmington Avenue to Sumner Street. This improvement is badly needed.

28. Plan for the removal of the Garden Street Reservoir. If track changes are made at the depot so as to carry Asylum Street over them, the material in the embankments could be

used for the new approaches of Asylum Street over the railroad. The removal of the Garden Street Reservoir would also permit a better location for Broad Street extension from Farmington Avenue to Collins Street.

29. The construction of the second cross-town trolley line in Sigourney Street.

30. The construction of the third cross-town trolley line in Scarborough Street, Whitney Street, and Smith Street.

31. The appropriation of a circular or semi-circular space at the summit of Prospect Avenue north of Asylum Street as a park feature, and to preserve one of the grandest views of Hartford and the surrounding country. A retaining wall could be built around the portion east of Prospect Avenue, and benches or settees could be provided as a resting place for visitors.

32. The widening of Albany Avenue between the Tunnel and East Street.

33. A general plan for the layout of all undeveloped areas and a determination of the location and width of all new streets across these areas to best connect with the present street system and to prevent objectionable subdivisions.

34. The selection of suitable areas for additional children's playgrounds.

35. The advisability of limiting the height of buildings on all streets surrounding Bushnell Park so as to preserve a suitable setting or framing for this priceless treasure.

36. The advisability of limiting the height of buildings throughout the city, the limit to vary in different sections according to the use of the property, or in proportion to the street widths.

37. What preventive measures should be adopted against disastrous fires, whether by an extension of the fire limits, the opening of new streets through the hazardous areas, or the installation of a high pressure fire system.

38. A plan for the improvement of housing conditions so as to prevent intensive congestion, and reduce unnecessary deaths from preventable diseases.

39. A plan for best regulating objectionable billboard advertising, the smoke nuisance, and unnecessary street noises.

40. Layout of Church Street extension from the corner of Spruce Street northerly and westerly to the corner of Garden and Ashley Streets.

41. The opening of the easterly end of Grove Street to the Connecticut River and recovery for the use of the public of whatever rights the city ever had there.

42. The extension of Ann Street southerly from Asylum to Pearl Street.

43. The advisability of dividing the city into zones for different uses and with possibly different restrictions regarding height of buildings, and the percentage of area which can be built upon, etc., following the practice which is being introduced in several German cities.